



Delaware Division of Professional Regulation

Candidate Information Bulletin

FREQUENTLY ASKED QUESTIONS

1. **HOW DO I REGISTER TO TEST?** Go to <https://provexam.com/scheduler/>. You may also call us at 866-720-7768. [Click here](#) for more information about registering.
2. **WHERE CAN I TEST?** You may test at any one of Prov's testing centers. [Click here](#) for a current list and directions to each of our testing centers.
3. **HOW MUCH DOES IT COST?** Exams costs **\$100** each.
4. **WHEN DO I GET MY TEST RESULTS?** Exam results are available once you complete your exam. They will be emailed to you within minutes of test completion.
5. **ARE THERE ANY STUDY AIDS?** Yes, in our [bookstore](#) we sell practice examinations to help you prepare for your test.
6. **WHAT IS ON THE TEST?** [Click here](#) for information about the available examinations.

MORE QUESTIONS

Please read through this bulletin completely for answers to your questions. If you still have unanswered questions, you may contact us at the following:

For Licensing Questions -
**Delaware Division of
Professional Regulation**
861 Silver Lake Blvd., Cannon
Building, Suite 203
Dover, Delaware 19904
Phone: **(302) 744-4500**
<https://dpr.delaware.gov/>
Monday – Friday
Hours: 8:15 a.m. – 4:15 p.m

For Testing Questions -
Prov, Inc.
200 W Civic Center
Drive Suite 160
Sandy, UT 84070
Phone: (866) 720-7768
Fax: (386) 518-6419
<http://provexam.com>
Monday – Friday
Hours: 8 a.m. to 6 p.m.

GENERAL TESTING INFORMATION

Delaware Division of Professional Regulation oversees the licensing process for all Contractors in Delaware. The State has contracted with Prov, Inc. to develop, and administer their licensing examination program. This bulletin has been developed to help explain the rules and processes you will need to undertake to complete the testing requirement for your license.

Prov is not authorized to make the determination of which examination(s) candidates must take. If you are unsure which exam is needed for the license being sought, resolve this question before scheduling. If you have questions regarding which exam(s) to take, you must call the Division at **(302) 744-4500**.

EXAMINATION CATEGORIES & COST

The following is a list of the examinations administered by Prov for licensing through the Delaware Division of Professional Regulation.

Electrical

- Journeyman Electrician
- Residential Electrician
- Limited Electrician
- Master Electrician
- Elevator Mechanic

Plumbing & HVACR

- Master Plumber
- Master HVACR
- Master HVACR Restricted - Refrigeration
- Master HVACR Restricted - Air Conditioning
- Master HVACR Restricted - Gas Piping
- Master HVACR Restricted - Heating - Forced Air Systems, Ventilation, and Gas Piping
- Master HVACR Restricted - Heating - Hydronic Systems and Gas Piping

All exams are open book and timed. Detailed information about exam content, duration and reference materials can be found in the **Electrical Examinations** and the **Plumbing and HVACR Examinations** section of this document.

Examinations are Computer-based and cost is **\$100.00**.

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TESTING WITH PROV

Your exam will be administered by computer at one of Prov's testing centers. Prov's testing system is easy to use and requires no specific computer experience to take the test.


The following link will take you to a short video that demonstrates Prov's testing system:

<https://youtu.be/h3T9svnldLY>.

WHERE TO TAKE YOUR EXAM

You may take your examination at any of Prov's testing facilities nationwide. Within Delaware, Prov has four (3) testing centers where candidates can take their examinations. These testing centers are located in **Dover** and **Wilmington (2)**. Site addresses and testing availability are provided at the end of this bulletin.

HOW TO SCHEDULE ONLINE

1. To schedule your examination appointment online, navigate to the following URL:
<https://provexam.com/scheduler/>
2. Enter your identifying information into the system. The State has already shared your testing information with Prov. We need to locate your information within our system. Follow the on-screen fields to enter your Application ID and your Last Name. The **Application ID** will come from the Division of Professional Regulation (DPR) and is located on the DELPROS site. This ID number will also be emailed to you when you first make application to the State. Please enter all of the numbers, even the leading 0's. Then, enter your last name and select the **Retrieve Details** button.
3. On the Welcome Screen, you will schedule a Date, Time, and Location for your exam by selecting the link labeled:
 [Find suitable time and venue](#)
4. The scheduling system will provide a list of the different testing options/locations available. You may take the test at home using the "Examroom" option or you may select to take your test in-person.

In-person sites will be displayed graphically on a map to show where the different testing centers are located. Select a testing center from the list to the right of the map (either Examroom or an in-person location). The Examroom (home testing option) system will be displayed first. More information about Examroom is found on the next page.

5. Select the SCHEDULE link to check the calendar for the testing center.
6. Select a test **date** and **time** from the calendar that matches your schedule.
7. Confirm your selected date and time and select **Add to Cart**.
8. Proceed to payment. If you have provided an email address, the invoice for your exam payment will be automatically emailed to you.

If you have any problems with online scheduling, give us a call at (866) 720-7768.

SCHEDULING BY PHONE

To schedule for an examination by phone, candidates should contact Prov toll free at 866-720-7768. Prov scheduling staff is available 8:00 a.m. through 6:00 p.m. ET, Monday through Friday.

Candidates should be prepared to provide the Prov scheduling staff with their name, Prov Candidate ID and their zip code. Once Prov confirms the candidate's identity, Prov staff will search the database for the next available testing session at the candidate's preferred testing location and will provide candidates with any alternate locations that may be in close proximity to their address.

Once candidates are scheduled, Prov staff will email them information regarding their testing schedule.

TESTING SITE AVAILABILITY

You may take your examination at anyone of Prov's testing facilities nationwide.

You can also take the exam at home using Prov's Examroom® service.

What is Examroom?

Examroom is a remote test monitoring service that allows you to take the test on your own computer at your home. You schedule the test the same way you would an in-person testing site; by selecting your preferred test date and time. Then, on test day, you log into the Examroom website and request to start your exam.

A test proctor will greet you over your computer, verify your identity, take your picture, and observe you throughout the testing process.

How to decide whether to use Examroom? **Not every computer system is capable of taking a test on Examroom.** The following are the MINIMUM requirements that your computer system would need in order to qualify to take the test using the Examroom service:

- Operating system on computer needs to be recent (less than 3-4 years old)
- Works on a MAC, PC, or Chromebook
- Need either a Chrome or Firefox browser (Chrome works best)
- Need a functioning computer web-camera and microphone
- Need a good consistent Internet connection capable of **uploading** files in excess of 3 Mbps

Please use the following link to do a system check **before you schedule** the exam to make sure your computer system will support testing using the Examroom Service.

<https://examroom.ai/systemtest/>

When prompted "Permission to access camera and microphone", you must click "Allow".

If your system does not allow you to test at home, don't worry, we have some great testing locations that are not too far away.

Fixed Testing Locations

The following are the existing testing sites and testing days of the week. Note that sites may change as needed. Please refer to the current online scheduling system to find available testing times for each location.

Location	Monday	Tuesday	Wednesday	Thursday	Friday
Dover - ESCC		*	*		
Wilmington - DSU	*	*		*	
Wilmington - ECDC	*	*	*	*	*

TEST SITE LOCATIONS

1. **Delaware State University - Testing Services**
3931 Kirkwood Highway
Wilmington, Delaware 19808

Availability: Computer tests are administered on Tuesdays, Wednesdays & Thursdays at 9 am & 1:00 pm.

2. **Eastside Career Development Center - Dover**
SRCC Testing Services
109 North West Street
Dover, Delaware 19904

Availability: Computer Tests are administered on Tuesdays and Wednesdays at 8:30 am & 1:00 pm.

3. **Eastside Career Development Ctr. - Wilmington**
Testing Services
839 North Pine Street
Wilmington, Delaware 19801

Availability: Computer tests are administered on Tuesdays, Wednesdays, and Thursdays at 8:00 am and 12:00 pm.

CANCEL/RESCHEDULING POLICY

If you need to change or cancel your testing appointment, you must contact Prov at least **three (3) business days** prior to your scheduled test date. Rescheduling is free if Prov is notified by the deadline. If you fail to appear for their test or fail to cancel or reschedule your testing session by the close of business three days prior to their scheduled test date, you will forfeit your exam fees.

PREPARING FOR YOUR EXAMS

The licensing examination that you will take has been designed to test what qualified individuals should know as they work in the construction trades as a licensed professional. The test questions used on the examinations have been prepared and reviewed by a panel of qualified individuals and cover the wide range of topics individuals would normally encounter as a master or journeyman during regular work operations.

Prov recommends that you prepare for your exam by familiarizing yourself with the subject areas listed in each exam description. Additionally, familiarize yourself with the reference materials that are allowed during the examination. The more time you spend outside of the testing room studying, the less time you will need to spend in the testing room trying to locate information. You are encouraged to prepare your test materials by highlighting text or placing permanent tabs on important pages.

PURCHASING REFERENCE MATERIALS & STUDY GUIDES

The exams described above are based upon the study references for each exam. We have listed the reference book's ISBN and a website at which candidates can purchase the reference book. Most reference books can also be purchased by phone or online through the following companies. Shipping charges will apply. Brick and mortar locations are indicated, but candidates should call to verify that orders are ready for pickup.

Many of the books for your examination are available from Prov using the following information.

- **Prov Bookstore**
10234 South 2460 East
Sandy, Utah 84092
<https://www.provexam.com/shop/>
Toll Free: 866-720-7768

Books also available from the following book vendors.

- **@ Home Prep, Inc.**
900 East Hill Ave, Suite 380, Knoxville, TN 37915
www.contractor-licensing.com
800-952-0910

- **AAA Construction School, Inc.**
34 Arlington Road South, Jacksonville, FL
32216 www.aaaconstructionschool.com
800-741-7277 or 904-722-9994
- **American Contractors Exam Services**
737 Southern Hwy, Mineral Wells, WV 26150
www.examprep.org
800-992-1910
- **Builder's Book Depot**
1001 East Jefferson Rd, Ste 5, Phoenix, AZ
85034
www.buildersbookdepot.com
800-284-3434 or 602-252-4050
- **North American Contractors Association**
www.infonaca.com
336-540-0149

If candidates need assistance in ordering any study materials, they may contact Prov by phone at 866-720-7768.

PRACTICE EXAMS AVAILABLE FROM PROV

Prov also offers practice examinations in several exam categories. Practice examinations cost \$25.00 each and may be ordered either by phone or online at www.provbookstore.com. Practice examinations prices do not include tax nor shipping. Candidates must be sure to use the correct shipping option when ordering.

TEST DAY RULES AND PROCEDURES

Check-in Deadline

The doors to each testing center will open at least 15 minutes before all scheduled testing appointments in order to check candidates into the testing center. You should plan to arrive early to make sure you are seated by the time the testing begins. If you arrive late, AND the testing session has already begun, YOU WILL BE TURNED AWAY, will forfeit your exam fees, and will be required to reschedule for a future testing date.

Proof of Identity

Upon arriving at the testing center, you will be required to show government-issued, photo-bearing identification. The photo-bearing ID must be current and valid. Forms of valid photo-bearing ID are a driver's license, passport, or military ID. You will also be required to sign a test center log and will be photographed by the test center staff.

If you cannot produce a valid government-issued photo ID, refuse to participate in signing the test center log, or refuse to be photographed, you will be dismissed from the testing center and forfeit all testing fees for that testing session.

If you do not have a photo ID, you may still present a valid State driver's license without a photo, a State ID card without a photo that is issued by the DMV, or a birth certificate.

Prohibited Items

No cameras, recorders, cell phones or other communication devices are allowed in the testing room. Talking and smoking are not allowed in the testing room.

Approved Items

You may bring the following approved items into the testing center:

- **Calculator.** Only simple 4-function calculators are permitted. PDAs, tablets, cell phones or other special calculators are NOT permitted.
- **Approved References.** (See information below).

Reference Material Rules

All examinations are designed to allow you to use **authorized** references while taking their exams. For a list of what reference materials are authorized for the exams, please refer to the exam description for the candidate's exam. All reference materials will be checked by the Prov test administrator prior to the candidates being permitted access to the testing room.

You should prepare your reference materials using **ONLY** the following methods.

- Highlighting
- Underlining in pen only
- Attaching permanent tabs

Reference materials which do not meet the following guidelines will not be allowed in the testing room. These guidelines are in place to ensure that every candidate is tested fairly, and that no candidate has access to unapproved resources.

- Handwritten notes are NOT allowed in any portion of a reference book and will need to be erased prior to using the materials.

- Moveable tabs are NEVER permitted in a reference book.
- A reference book CANNOT contain Post-it notes.
- Photocopied documents CANNOT be added to a reference book.
- Photocopied versions of a reference book are NEVER permitted.
- Test preparation study guides are NOT approved references and are NOT permitted in the testing center; this includes practice examinations.

We ask that you leave all unauthorized materials in your car or vehicle. If you are caught using unauthorized materials during testing, these materials will be confiscated, your testing will be terminated with fees forfeited, and the Department will be notified of your dismissal from the exam. During the testing process you **MAY NOT**:

- Share reference materials during testing.
- Highlight, underline, mark or write any kind of information in their reference materials during testing.

Visitor Policy

No one other than the candidate will be allowed in the testing room. Non-testing visitors are NOT permitted to wait in the lobby while candidates test.

Unethical Conduct Policy

Any individual caught giving or receiving assistance during or after the examination or caught using unauthorized materials during the examination will be reported directly to the Department. Those caught in the act of cheating will be dismissed from the examination and their testing results will be frozen. Furthermore, the candidate will forfeit the examination fees paid. Finally, anyone caught with test questions in their possession, either during or following the examination will be prosecuted by Prov for theft of copyrighted testing materials.

RESULTS REPORTING

Upon completion of an examination, your test will be scored, and you will be provided with a score result while at the testing center. There is no charge for the on-site scoring. DPR will be notified of your results automatically.

The passing score for the various examinations are as follows:

Electrician Examinations **75%**

HVACR and Plumbing Examinations **70%**

Those achieving these passing scores or higher will receive a passing grade on that exam. Because the examination process is a requirement for licensure with the Delaware Division of Professional Regulation, candidates automatically consent to permit Prov to share their test results with the State.

RETESTING POLICY

Test candidates may retake their examination after waiting a period of a minimum of **seven (7)** days from the previous test. For most test takers there is no limit on the number of times a failed test may be retaken.

If you are taking a **Plumbing/HVACR** test, you are limited to a total of three (3) testing attempts before your eligibility of your application expires. If you are unsuccessful after three attempts, you will be required to wait one year and submit a new application, or, begin the application process again.

REVIEWS

Reviews are intended to help candidates audit their testing results by allowing them to see which questions were missed during testing.

You may request a review of your exam only after failing an exam category a minimum of two (2) times. To be eligible for a review, you must score within 10 points of the required passing score. The review for all tests is 1-1/2 hours in length. The review will be conducted under the same testing conditions as the exam using the same test security rules.

The cost of the review is the same as the exam fees and based on when you wish to review your test. Candidates will request or schedule a review using the same methods described earlier for scheduling.

If you are interested in a review, please contact Prov by phone and we will create a "Review Eligibility" for your specific examination. Once that is created, you will be able to schedule your review similar to how you schedule your examination.

EXAM CHALLENGE PROCESS

If during an exam or review, candidates encounter a question they think is inaccurate or otherwise incorrect, they are encouraged to submit an Exam Comment to Prov detailing why they feel the question is in error. Candidates make their comments directly in the testing system by using the Comment button.

Prov staff will review each comment within two weeks of receipt by Prov and will make scoring adjustments should any comment result in a change to a test question.

HAND SCORE REQUEST

Prov ensures the accuracy of our exam results. Our computer system is designed to identify and report any potential error in data collected from an exam session. If you would like to have your score reassessed for accuracy, you can request a Hand Score by calling Prov at 1-866-720-7768 and asking for a Hand Score Request Form.

A Hand Score Request form requires a signature and must be mailed to Prov. Forms must be received by Prov no later than ninety (90) days after your examination administration date and must be accompanied by a copy of your original score letter.

Once a Hand Score is received, Prov Staff will process the request within seven (7) to ten (10) business days. During the Hand Score process a staff member will ensure that your answers were properly recorded and scored by comparing the captured answers to the exam key. Upon completion of the Hand Score we will provide a letter by mail to report the outcome of the reassessment.

The cost of the hand score is \$25.00 (includes tax).

PROV'S NON-DISCRIMINATION STATEMENT

Prov provides equal access to its exams and testing programs for all eligible persons. Although individual jurisdictions that Prov represents are wholly responsible for determining eligibility of candidates, it is the policy of Prov to maintain an environment free of discrimination and to prohibit discrimination and harassment against any person on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and veteran, marital or family status.

Harassment of Prov program participants, proctors, staff, or candidates will not be tolerated. If candidates wish to express concerns about discrimination, they should contact Prov at 866-720-7768 or write to: Prov, Inc., 200 W Civic Center Drive, Suite 160, Sandy, UT 84070.

SPECIAL ACCOMMODATIONS

Prov complies with the Americans with Disabilities Act (ADA) in providing special accommodations for candidates that require additional assistance during the testing process. If candidates feel that they qualify for a special accommodation during testing, they should contact Prov at (866) 720-7768.

Prov will require written documentation from a licensed physician or psychologist documenting the disability and further require a request describing the requested remedy. Prov will then work directly with the candidates to make the accommodations they will need to complete their examination.

ELECTRICAL EXAMINATIONS**Journeyman Electrician**

A Journey-level Electrician is qualified and tested to perform work in the electrical trades while under the supervision of a Master Electrician.

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
General Electrical Theory & Principles	9
Plan Reading	4
Equipment for General Use	6
Motors & Controls	3
Wiring & Protection	14
Wiring Methods & Materials	22
Communication Systems	4
Special Conditions	3
Special Equipment	3
Special Occupancies	2

References (The following books may be used during testing)

- **American Electrician's Handbook, 17th Edition**. ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at <https://www.mhprofessional.com/>.
- **NFPA 70 - National Electrical Code 2020**. ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Residential Electrician

Tests a candidate's knowledge of the planning, installation, repair, alteration, and maintenance of electrical conductors, raceways, and equipment for light, heat, and power in one-, two- and multi-family dwellings.

Number of Questions	60
Time allowed (hours)	3
Subject Area	# Quest.
General Electrical Knowledge	15
Wiring & Protection	15
Wiring Methods & Materials	10
Equipment for General Use	7
Special Equipment	3
Special Conditions	3
Communication Systems	2
Plan Reading	2
Motors & Controls	3

References (The following books may be used during testing)

- **American Electrician's Handbook, 17th Edition.** ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at <https://www.mhprofessional.com/>.
- **NFPA 70 - National Electrical Code 2020.** ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Limited Electrician

Tests a candidate's knowledge of the design, plan, installation, repair, alteration, and maintenance of electrical conductors, raceways, and equipment for light, heat, and power in one-, two-, and three-family dwellings.

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
General Electrical Knowledge	20
Equipment for General Use	7
Wiring & Protection	18
Wiring Methods & Materials	18
Special Equipment	3
Communication Systems	4

References (The following books may be used during testing)

- **American Electrician's Handbook, 17th Edition.** ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at <https://www.mhprofessional.com/>.
- **NFPA 70 - National Electrical Code 2020.** ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

Master Electrician

Master Electrician shall mean a person, licensed by the Board, to plan, estimate, layout, perform or supervise the installation, erection or repair of any electrical conductor, duct, raceway, conduit, machinery, apparatus, device or fixture for the purpose of lighting, heating or power in any structure.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
General Electrical Knowledge	19
Plan Reading	4
Equipment for General Use	5
Wiring & Protection	15
Wiring Methods & Materials	15
Motors & Controls	7
Special Conditions	4
Special Equipment	4
Special Occupancies	4
Communication Systems	3

References (The following books may be used during testing)

- **American Electrician's Handbook, 17th Edition.** ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272. Available at <https://www.mhprofessional.com/>.
- **NFPA 70 - National Electrical Code 2020.** ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.
- **Ugly's Electrical References, 2020.** ISBN: 978-1-284-19453-1. Jones and Bartlett Publishers, 40 Tall Pine Dr., Sudbury, ME 01776.

Elevator Mechanic

Elevator Specialty Electrical Contractor means the scope of certification includes and is limited to the electrical portion of the installation, repair, assembly, service and maintenance of elevators, conveyors, electrified dumbwaiters, escalators and moving sidewalks and all automatic and manual controls, signal systems and all other devices and manual controls, and electrical wiring appurtenant to the safe and efficient operation of such elevators. However, the scope of such certification shall not include work beyond the last disconnecting means or the terminal equipment adjacent to or in the elevator shaft or designated construction area. As regulated under Florida Statute, a person who has passed a competency examination as an Elevator Specialty Electrical Contractor may perform these or related tasks or may supervise persons in his employ in the execution of these tasks.

Number of Questions	50
Time allowed (hours)	2
Subject Area	# Quest.
Commercial Elevators & Lifts	15
Construction Elevators	4
Dumbwaiters	3
Emergency Service & Signaling Devices	5
Escalators	5
General Electrical Knowledge	5
Moving Walks	3
Residential Elevators & Lifts	5
Safety	5

References

- **American Electrician's Handbook, 17th Edition.** ISBN: 978-1260457919. McGraw Hill Publishing Inc., P.O. Box 182604, Columbus, OH 43272.
- **ASME A17.1-2010 Safety Code for Elevators and Escalators, 2010.** ISBN: 978-0-7918-3311-7. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **ASME A17.3-11 Safety Code for Existing Elevators and Escalators, 2011.** ISBN: 978-0-7918-3359-9. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990. Available at <http://www.asme.org/shop/>.
- **NFPA 70 - National Electrical Code 2020.** ISBN: 9781455922970. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471. Available at www.nfpa.org.

PLUMBING AND HVACR EXAMINATIONS

Master Plumber

A Master Plumber can provide plumbing services including the design, installation, construction, replacement, service, repair, alteration, or modification of the pipes, fixtures, and other apparatus used for bringing the water supply into a building and removing liquid and water-carried wastes from a building. Plumbing services also include the installation and connection of gas piping.

Number of Questions	100
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	16
Isometrics & Plan Reading	8
Plumbing Math	8
Drain, Waste & Vent Systems	14
Water Supply and Distribution	14
Fixtures & Fittings	8
Water Heaters	10
Fuel Gas Systems	10
Storm & Roof Drainage	6
Safety	6

References (The following books may be used during testing)

- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org
- **International Plumbing Code 2018.** ISBN: 978-1-60983-745-7. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org
- **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

Master HVACR

A Master HVACR can design, install, construct, maintain, service, repair, alter, or modify a product or equipment including gas piping in heating and air conditioning, refrigeration, ventilation, or process cooling or heating systems.

Number of Questions	100
Time allowed (hours)	1.67
Subject Area	# Quest.
General Knowledge	28
Piping	12
Equipment	18
System sizing and installation	18
Ventilation and Exhaust Systems	14
Testing and Inspection	10

References (The following books may be used during testing)

- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available @iccsafe.org OR <https://provexam.com/bookstore/>.
- **International Mechanical Code 2018.** ISBN: 978-1-60983-743-3. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available @iccsafe.org OR at <https://provexam.com/bookstore/>.
- **Low Pressure Boilers, 5th edition.** American Technical Publishers, 10100 Orland Parkway Suite 200, Orland Park, IL 60467-5756. Available at www.go2atp.com.
- **Modern Refrigeration and Air Conditioning, 21st Edition.** ISBN: 978-1-63563-877-6. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

OR

- **Advanced Mechanical Study Guide, 2nd edition.** ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com. This study guide may substitute Modern Refrigeration and Air Conditioning.
- **ACCA Duct Slide Rule.** Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206. Available at www.acca.org.
- **Residential Load Calculation - Manual J, 8th Edition.** ISBN: 9781892765253. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

Master HVACR Restricted - Refrigeration

Master HVACR knowledge of the installation, maintenance, repair, and alteration of refrigeration systems and related appurtenances intended to be used to cool a surface or area below 55 degrees Fahrenheit or 12.9 degrees Celsius for the purpose of food and product preservation, unlimited in tonnage or horsepower.

Number of Questions	75
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	24
Piping	19
Systems & Sizing	20
Maintenance	6
Testing and Inspection	6

References (The following books may be used during testing)

- **International Mechanical Code 2018.** ISBN: 978-1-60983-743-3. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org OR at <https://provexam.com/bookstore/>.
- **Modern Refrigeration and Air Conditioning, 21st Edition.** ISBN: 978-1-63563-877-6. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

OR

- **HVAC Basics for Contractors, 3rd Edition** and **Intermediate Mechanical Study Guide.** Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com. These two study guides may substitute Modern Refrigeration and Air Conditioning.

Master HVACR Restricted - Air Conditioning

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	95
Time allowed (hours)	4
Subject Area	# Quest.
General Knowledge	22
Plan Reading	8
Systems & Sizing	17
Piping	14
Equipment	18
Maintenance	16

References (The following books may be used during testing)

- **International Mechanical Code 2018.** ISBN: 978-1-60983-743-3. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org OR at <https://provexam.com/bookstore/>.
- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org OR at <https://provexam.com/bookstore/>.
- **Modern Refrigeration and Air Conditioning, 21st Edition.** ISBN: 978-1-63563-877-6. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

OR

- **Intermediate Mechanical Study Guide** and **Advanced Mechanical Study Guide, 2nd Edition.** Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com. These two study guides may substitute Modern Refrigeration and Air Conditioning.
- **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
- **Residential Load Calculation - Manual J, 8th Edition.** ISBN: 9781892765253. Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

Master HVACR Restricted - Gas Piping

Tests a candidate's knowledge of the design, installation, maintenance, repair, alteration, and extension of gas piping, gas mains, lines, laterals, tanks, appliances, and related appurtenances.

Number of Questions	46
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	7
Isometrics & Plan Reading	2
Sizing and Design	5
Pipefitting Math	6
System Installation	9
LP Gas	7
Venting	5
Safety	5

References (The following books may be used during testing)

- **Basic Safety.** ISBN: 9781323676189. Prentice Hall, P.O. Box 11071, Des Moines, IA 50336. Available at www.provbookstore.com.
- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at [iccsafe.org](https://provexam.com/bookstore/) OR at <https://provexam.com/bookstore/>.
- **Mathematics for Plumbers and Pipefitters,** 8th edition. ISBN: 978-1-111-64260-0. Delmar/Thomson, P.O. Box 6904, Florence, KY 41022. Available at <http://www.cengage.com/us/>.

Master HVACR Restricted - Heating - Forced Air Systems, Ventilation, and Gas Piping

A Master Heating 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.

Number of Questions	70
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	15
Piping	12
Systems & Sizing	20
Equipment	6
Maintenance	12
Plan Reading	5

References (The following books may be used during testing)

- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at iccsafe.org OR at <https://provexam.com/bookstore/>.
- **International Mechanical Code 2018.** ISBN: 978-1-60983-743-3. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. Available at iccsafe.org OR at <https://provexam.com/bookstore/>.
- **Modern Refrigeration and Air Conditioning, 21st Edition.** ISBN: 978-1-63563-877-6. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

OR

- **Advanced Mechanical Study Guide, 2nd Edition.** ISBN: 9781323725184. Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com. This study guide may substitute Modern Refrigeration and Air Conditioning.

Master HVACR Restricted - Heating - Hydronic Systems and Gas Piping

Master Heating System Specialist - Hydronics is licensed to provide design, installation, construction, maintenance, service, repair, alteration, or modification of a product or of equipment limited to hydronic systems and gas piping services for hydronic systems.

Number of Questions	80
Time allowed (hours)	3
Subject Area	# Quest.
General Knowledge	22
Hydronic Systems	10
Piping, Pumps, Valves	10

Fuel Gas and Oil	12
Boilers - Low and High Pressure	14
Water	8
Testing and Inspection	4

References (The following books may be used during testing)

- **International Fuel Gas Code 2018.** ISBN: 978-1-60983-741-9. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org OR at <https://provexam.com/bookstore/>
- **International Mechanical Code 2018.** ISBN: 978-1-60983-743-3. International Code Council, 4051 West Flossmoor Road, Country Club Hills, IL 60478. available @iccsafe.org OR at <https://provexam.com/bookstore/>
- **Low Pressure Boilers, 5th edition.** American Technical Publishers, 10100 Orland Parkway Suite 200, Orland Park, IL 60467-5756. Available at www.go2atp.com.
- **Modern Refrigeration and Air Conditioning, 21st Edition.** ISBN: 978-1-63563-877-6. Goodheart-Wilcox Company, Inc., 18604 West Creek Dr., Tinley Park, IL 60477-6243. Available at www.g-w.com.

OR

- **Intermediate Mechanical Study Guide and Advanced Mechanical Study Guide, 2nd Edition.** Pearson, 501 Boylston Street, Suite 900, Boston, MA 02116. Available at www.provbookstore.com. These two study guides may substitute Modern Refrigeration and Air Conditioning.

SAMPLE TEST QUESTIONS

The following are sample questions that reflect the format and style of the questions found on exams.

1. The bonding conductor used to connect the bonding grid on a swimming pool shall NOT be smaller than a solid #
 - a. 10 AWG.
 - b. 8 AWG.
 - c. 6 AWG.
 - d. 4 AWG.
2. What does the alpha character I represent when stating the equation $P = E \times I$?
 - a. Intrinsic circuit
 - b. Intrinsic electromotive force
 - c. Intensity of current
 - d. Isotopic character

3. If 15-amp circuits were used, the NEC would require a 2000 square foot house to have a MINIMUM of how many branch circuits?
 - a. 2
 - b. 3
 - c. 4
 - d. 5
4. Equipment that is electrically connected to a telecommunications network is required to be listed in accordance with section _ of the NEC.
 - a. 110.16
 - b. 240.6
 - c. 800.18
 - d. Chapter 9, Table 5(A)
5. A required emergency standby generator that utilizes an internal combustion engine as the "prime mover" is required to have sufficient fuel supply on premises to operate for a period of NOT less than ____ hours at full demand operation of the system.
 - a. 24
 - b. 12
 - c. 8
 - d. 2
6. Which section of the NEC determines the installation of service equipment on manufactured buildings?
 - a. 230.60
 - b. 230.70
 - c. 240.6
 - d. 250.66
7. The MAXIMUM ampacity of an individual branch circuit using type FCC cable is
 - a. 15 amps.
 - b. 20 amps.
 - c. 30 amps.
 - d. 50 amps.

8. The MINIMUM service demand for 10-8 kW ranges in an apartment complex would be
 - a. 80 kW.
 - b. 27.2 kW.
 - c. 25 kW.
 - d. 16 kW.

ANSWERS TO SAMPLE QUESTIONS

1. **B** - 8 AWG.
2. **C** - Intensity of current
3. **C** - 4
4. **C** - 800.18
5. **D** - 2.
6. **B** - 230.70.
7. **C** - 30 amps
8. **C** - 25 kW

TEST SITE INSTRUCTIONS

Written test site instructions are attached to this document that outline testing rules and computer testing navigation information that is very important. Please thoroughly review prior to your scheduled test date.