



PSI licensure:certification
 3210 E Tropicana
 Las Vegas, NV 89121



STATE OF OKLAHOMA

ELECTRICAL, MECHANICAL, ROOFING, AND PLUMBING EXAMINATIONS CANDIDATE INFORMATION BULLETIN

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Please refer to our website to check for the most updated information at <https://test-takers.psiexams.com/okcontractors>

EXAMINATIONS BY PSI

This Candidate Information Bulletin provides you with information about the examination and application process for Contractors Licensure in the State of Oklahoma.

Eligibility for examination is determined by the State of Oklahoma Construction Industries Board.

2401 NW 23rd Street, Suite 2F
Oklahoma City, OK 73107
www.ok.gov

The Board has contracted with PSI to conduct its examination program. PSI provides examinations through a network of computer examination centers in Oklahoma and in many areas throughout the United States. PSI works closely with the State to be certain that examinations meet local as well as national requirements in basic principles and examination development standards.

EXAMINATION SCHEDULING PROCEDURES

Once you have been approved by the State, you are responsible for contacting PSI to schedule an appointment to take the examination. You may either schedule via the Internet at <https://test-takers.psiexams.com/okcontractors>, or schedule over the telephone at (855) 834-8750.

Each Examination Portion

\$100

NOTE: REGISTRATION FEES ARE NOT REFUNDABLE OR TRANSFERABLE

The fee is for each registration, whether you are taking the examination for the first time or repeating.

- There is no expiration on your eligibility.
- If you fail the first time, you must wait 30 days before retesting.
- For every failure after (and including) the second fail, you must wait 90 days before retesting.

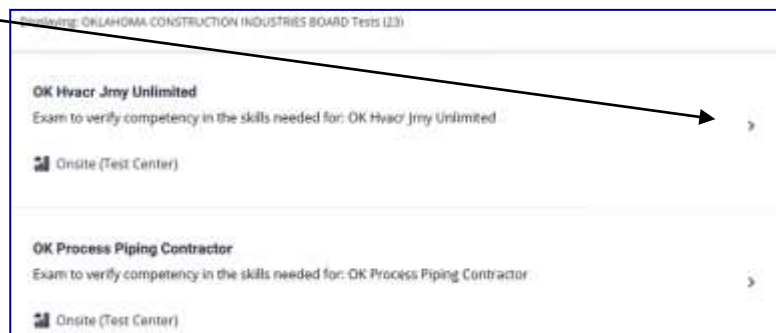
ONLINE (<https://test-takers.psiexams.com/okcontractors>)

For the **fastest and most convenient** examination scheduling process, register for your examinations online by accessing PSI's registration Website: [Click Here](#) or on the email confirmation you received from PSI.

1. Select "Tests" to create an account.



2. Select the examination you will be taking.



3. You will be prompted to create an account with PSI.

OK Hvacr Jrny Unlimited
Exam to verify competency in the skills needed for: OK Hvacr Jrny Unlimited

Candidate Bulletin
Fee:
Retake Fee:
Fee Policy:

To continue the booking process and schedule your test, you must login or create an account. **LOGIN/REGISTER**

4. Select Create Account.

Login
Sign in to retrieve your **OKLAHOMA CONSTRUCTION INDUSTRIES BOARD** test information. Don't have an account? [Create Account](#)

Email * Password *

*Required:

LOGIN [Forgot Password?](#)

5. Fill out your personal information. The Ok Con ID # is provided by the Board.

Create Account *Required

Ok Con ID *

First Name * Last Name *

Middle Name Generation

Email *

Password *

Confirm Password *

Your password must contain:

- At least one capital letter A-Z
- At least one lower case letter a-z
- At least one number 0-9
- At least one special character !@#v\$%^&*~
- At least 8 and up to 32 characters

6. The examination you are approved for will be selected.

Test Portions More Info

| Portion Name | Type | Duration | Language | Fee | Select |
|-------------------------------------|----------|-------------|----------|---------------|-------------------------------------|
| OK Sheet Metal Contractor Technical | Optional | 120 Minutes | | \$ 100.00 USD | <input type="checkbox"/> |
| Mechanical Bus and Law | Required | 120 Minutes | | \$ 100.00 USD | <input checked="" type="checkbox"/> |

Total Price: \$100.00 USD **CONTINUE BOOKING**

7. Enter your zip code and the closest test centers will appear.

Find Your Nearest Test Center:

City, province, or postal code

Radius: 5

Miles Kilometers



8. Select the test center, month, and date you would like to take the examination.

Choose a Date and Time

August 2021

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 | 31 | | | | |

Time slots available for August 18, 2021

12:00 AM

07:00 AM

9. You are now ready to pay.

Payment

Billing Address

Address 1 *

Address 2

Address 3

City *

Order Summary

Commercial Contractor Practice Test
Mechanical Bus and Law \$100.00 USD

Total Price

CONTINUE


10. Once payment has been made you will receive the email confirmation.

Booking Confirmed!! [Print Confirmation](#)

Email Address: yatinkane+17083@gmail.com Office Phone: 9765400949 Street Address1: 46, Anant Prema

Address2: Gokulwadi State: Oklahoma State (If not USA): test

City: Sanquelim Country: US Postal Code: 73051

 **Mechanical Bus and Law**
Thursday, August 26, 2021 [Add to Calendar](#)
12:00 AM Pacific Time
psiq_a_s_offline, 2835 N Naomi St, Suite 110, burbank, California, United States

Order Summary

| | |
|---|---------------------|
| Test Fee | |
| Commercial Contractor Practice Test | \$24.95 USD |
| Mechanical Bus and Law Scheduled | \$100.00 USD |
| Tax | \$0.00 USD |
| Total Price | \$124.95 USD |

Billing Address

481 Benson Park Drive, , ,
Oklahoma City, Oklahoma, United States, 73102

TELEPHONE REGISTRATION

For telephone registration, you will need a valid credit card (Visa, MasterCard, American Express or Discover).

PSI registrars are available at (855) 834-8750, Monday through Friday between 6:30 am and 9:00 pm, and Saturday-Sunday between 8:00 am and 4:30 pm, Central Time, to receive your payment and schedule your appointment for the examination.

STANDARD MAIL REGISTRATION

Complete the PSI registration form (found at the end of this bulletin), and appropriate examination fee to PSI. Payment of fees can be made by credit card (Visa, MasterCard, American Express or Discover), company check, money order or cashier's check, made payable to PSI. Print your name on the check or money order to ensure that your fees are properly assigned. **CASH and PERSONAL CHECKS ARE NOT ACCEPTED.**

Please allow 2 weeks to process your registration. After 2 weeks, you may go online or call PSI to schedule the examination.

MISSED APPOINTMENT OR LATE CANCELLATION

Your registration will be invalid, you will not be able to take the examination as scheduled, and you will forfeit your examination fee, if you:

- Do not cancel your appointment in the appropriate timeframe, please see the application form for details.
- Do not appear for your examination appointment.
- Arrive after examination start time.
- Do not present proper identification when you arrive for the examination.

EXAM ACCOMMODATIONS

All PSI examination centers are equipped to provide access in accordance with the Americans with Disabilities Act (ADA) of 1990, and exam accommodations will be made in meeting a candidate's needs. A candidate with a disability or a candidate who would otherwise have difficulty taking the examination must follow the instructions on the Exam Accommodations Request Form at the end of this Candidate Information Bulletin.

EXAMINATION SITE CLOSING FOR AN EMERGENCY

In the event that severe weather or another emergency forces the closure of an examination site on a scheduled examination date, your examination will be rescheduled. PSI personnel will attempt to contact you in this situation. However, you may check the status of your examination schedule by calling (855) 834-8750. Every effort will be made to reschedule your examination at a convenient time as soon as possible. You may also check PSI's website at <https://test-takers.psiexams.com/okcontractors>.

EXAMINATION SITE LOCATION

The Oklahoma Contractor licensing examinations are administered at the PSI examination centers in Oklahoma as listed below:

Oklahoma City

3800 N Classen Blvd, Ste C-20

Oklahoma City, OK 73118

Take I-235 to I-44. Take the Classen Blvd exit. Turn left on Classen. The office is located in a dark gray building on the East side of Classen.

Tulsa

2840 E. 51st Street, Suite 215

Tulsa, OK 74105

From I-44 West - Take exit 228 towards Harvard Ave. Merge onto E Skelly Dr. Use the 2nd from the left lane to turn left onto S Harvard Ave. Turn right onto E 51st St/east 51st Street South. Go about ½ mile then turn left onto Delaware Ct. The test center is in the first building on the left marked "Brittany Square Office Park".

Once inside the building, proceed to the 2nd floor. The test center is in Suite 215.

McAlester

21 East Carl Albert Parkway (US Hwy 270)

McAlester, Oklahoma 74501

From Main St: turn onto US 270 - E. Carl Albert Parkway. The Test Center will be on your left between Main and 1st St.

From US Hwy 69: Take the exit for US 270-W - Carl Albert Parkway and go approximately 1.5 miles. The Test Center will be on your right between 1st and Main St.

Woodward

1915 Oklahoma Ave, Suite 3

Woodward, OK 73801

From Highway 270, go west at the intersection of 9th and Oklahoma Avenue. Go west 10 blocks to 19th Street. The building is on the south side of Oklahoma Avenue, across from the Sonic Drive-In.

Lawton

Great Plains Technology Center

4500 SW Lee Blvd

Lawton, OK 73505

Travel on Lee Blvd. until reaching the Great Plains Technology Center School, which is located at 4500 Southwest Lee Blvd, Lawton, OK. Enter the east gate of the campus and drive straight until you find Building 300, also called the Worley Seminar Center. There are 3 sets of doors on the north side of this building. Enter the middle set of doors, turn right, and find the Instructional Services Department located in room 308.

Additionally, PSI has examination centers in many other regions across the United States. You may take this examination at any of these locations. Once you have paid for the examination, enter your zip code and a list of the testing sites closest to you will appear.

REPORTING TO THE EXAMINATION SITE

On the day of the examination, you should arrive at least 30 minutes before your appointment. This extra time is for sign-in, identification, and familiarizing you with the examination process. ***If you arrive late, you may not be admitted to the examination site and you will forfeit your examination registration fee.***



REQUIRED IDENTIFICATION AT EXAMINATION SITE

You must provide 2 forms of identification. One must be a VALID form of government issued identification (driver's license, state ID, passport, military ID), which bears your signature and has your photograph. The second ID must have your signature and preprinted legal name.

If you cannot provide the required identification, you must call (855) 834-8750 at least 3 weeks prior to your scheduled appointment to arrange a way to meet this security requirement. *Failure to provide all of the required identification at the time of the examination without notifying PSI is considered a missed appointment, and you will not be able to take the examination.*

SECURITY PROCEDURES

The following security procedures will apply during the examination:

- Only non-programmable calculators that are silent, battery-operated, do not have paper tape printing capabilities, and do not have a keyboard containing the alphabet will be allowed in the examination site.
- Candidates may take only approved items into the examination room.
- All personal belongings of candidates should be placed in the secure storage provided at each site prior to entering the examination room. Personal belongings **include, but are not limited to**, the following items:
 - **Electronic devices of any type, including cellular / mobile phones, recording devices, electronic watches, cameras, pagers, laptop computers, tablet computers (e.g., iPads), music players (e.g., iPods), smart watches, radios, or electronic games.**
 - **Bulky or loose clothing or coats** that could be used to conceal recording devices or notes. For security purposes outerwear such as, but not limited to: open sweaters, cardigans, shawls, scarves, vests, jackets, and coats are not permitted in the testing room. **In the event you are asked to remove the outerwear, appropriate attire, such as a shirt or blouse should be worn underneath.**
 - **Hats or headgear not worn for religious reasons** or as religious apparel, including hats, baseball caps, or visors.
 - **Other personal items**, including purses, notebooks, reference or reading material, briefcases, backpacks, wallets, pens, pencils, other writing devices, food, drinks, and good luck items.
- Person(s) accompanying an examination candidate may not wait in the examination center, inside the building or on the building's property. This applies to guests of any nature, including drivers, children, friends, family, colleagues, or instructors.
- No smoking, eating, or drinking is allowed in the examination center.
- During the check in process, all candidates will be asked if they possess any prohibited items. Candidates may also be asked to empty their pockets and turn them out for the proctor to ensure they are empty. The proctor may also ask candidates to lift up the ends of their sleeves and the

bottoms of their pant legs to ensure that notes or recording devices are not being hidden there.

- Proctors will also carefully inspect eyeglass frames, tie tacks, or any other apparel that could be used to harbor a recording device. Proctors will ask to inspect any such items in candidates' pockets.
- If prohibited items are found during check-in, candidates shall put them in the provided secure storage or return these items to their vehicle. PSI will not be responsible for the security of any personal belongings or prohibited items.
- Any candidate possessing prohibited items in the examination room shall immediately have his or her test results invalidated, and PSI shall notify the examination sponsor of the occurrence.
- Any candidate seen giving or receiving assistance on an examination, found with unauthorized materials, or who violates any security regulations will be asked to surrender all examination materials and to leave the examination center. All such instances will be reported to the examination sponsor.
- Copying or communicating examination content is violation of a candidate's contract with PSI, and federal and state law. Either may result in the disqualification of examination results and may lead to legal action.
- Once candidates have been seated and the examination begins, they may leave the examination room only to use the restroom, and only after obtaining permission from the proctor. Candidate will not receive extra time to complete the examination.

TAKING THE EXAMINATION BY COMPUTER

The examination will be administered via computer. You will be using a mouse and computer keyboard.

IDENTIFICATION SCREEN

You will be directed to a semiprivate testing station to take the examination. When you are seated at the testing station, you will be prompted to confirm your name, identification number, and the examination for which you are registered.

TUTORIAL

Before you start your examination, an introductory tutorial is provided on the computer screen. The time you spend on this tutorial, up to 15 minutes, DOES NOT count as part of your examination time. Sample questions are included following the tutorial so that you may practice answering questions and reviewing your answers.

TEST QUESTION SCREEN

The "function bar" at the top of the test question provides mouse-click access to the features available while taking the examination.

One question appears on the screen at a time. During the examination, minutes remaining will be displayed at the top of the screen and updated as you record your answers.

IMPORTANT: After you have entered your responses, you will later be able to return to any question(s) and change your response, provided the examination time has not run out.

EXPERIMENTAL QUESTIONS

In addition to the number of questions for the Mechanical, Roofing, and Plumbing exams, up to ten “experimental” questions may be administered to candidates during the examinations. These questions will not be scored, and the time taken to answer them will not count against examination time. The administration of such non-scored experimental questions is an essential step in developing future licensing examinations.

Note that time has been added to the Electrical exams to allow for these non-scored items, as shown in the Electrical Exams Content Outlines below.

EXAMINATION REVIEW

PSI, in cooperation with the Oklahoma Board, will be consistently evaluating the examinations being administered to ensure that the examinations accurately measure competency in the required knowledge areas. Comments may be entered by clicking on the Comments link on the function bar of the test question screen. Your comments regarding the questions and the examinations are welcomed.

Comments will be analyzed by PSI examination development staff. While PSI does not respond to individuals regarding these comments, all substantive comments are reviewed. If a discrepancy is found during the comment review, PSI and the Board may re-evaluate candidates’ results and adjust them accordingly. **This is the only review of the examination available to candidates.**

SCORE REPORTING

Your score will be given to you immediately following completion of the examination. The following summary describes the score reporting process:

- **On screen** - your score will appear immediately on the computer screen. This will happen automatically at the end of the time allowed for the examination.

- If you **pass**, you will immediately receive a successful notification.
- If you **do not pass**, you will receive a diagnostic report indicating your strengths and weaknesses by examination type with the score report.
- **On paper** - an unofficial score report will be printed at the examination site.

If you pass the license exam, the Oklahoma State Construction Industries Board will issue you a license.

DUPLICATE SCORE REPORTS

You may request a duplicate score report after your examination by emailing scorereport@psionline.com or by calling (855) 834-8750.

TIPS FOR PREPARING FOR YOUR LICENSE EXAMINATION

The following suggestions will help you prepare for your examination.

- Planned preparation increases your likelihood of passing.
- Start with a current copy of this Candidate Information Bulletin and use the examination content outline as the basis of your study.
- Read study materials that cover all the topics in the content outline.
- Take notes on what you study. Putting information in writing helps you commit it to memory, and it is also an excellent business practice. Discuss new terms or concepts as frequently as you can with colleagues. This will test your understanding and reinforce ideas.
- Your studies will be most effective if you study frequently, for periods of about 45 to 60 minutes. Concentration tends to wander when you study for longer periods of time.

EXAMINATION REFERENCE MATERIAL AND CONTENT OUTLINE

If a test question answer could differ because of conflicting information in test reference sources, a legal requirement such as code, law, or regulation overrides any other reference. If two legal requirements appear to conflict, the state-specific code, law, or regulation overrides the national one. Information from sources on the test reference list override information from other sources or persons.

Many of the reference materials listed are available for purchase at www.psionlinestore.com or by calling the PSI Online Store, toll-free, at (866) 589-3088. Titles currently in stock are listed on the order form near the end of this candidate information bulletin.



ELECTRICAL BUSINESS AND LAW

50 Scored Items - 120 minutes - 75% Correct to Pass

Non-Scored Items - 15 Minutes

| Topic Information | # of Items |
|--|------------|
| 1. Bidding and Estimating a. General Estimating b. Bid | 10 |
| 2. Project Management and Supervision a. General Project Oversight b. Oversee Budget c. Oversee Quality Control d. Oversee Materials Control e. Manage Jobsite Safety f. Schedule g. Potentially Hazardous Materials h. Environmental Protection i. Submittals and Reports j. Ethics k. Liens | 7 |
| 3. Contracts a. Terminology b. Required Elements/Components c. Contract Types d. Change Orders e. Standardized Documents f. Interpretation g. Warranties h. Documents/Inclusions i. Other Obligations | 5 |
| 4. Financial a. Business Organization Characteristics, Advantages, and Disadvantages b. Business Start-up c. Accounting Method d. Cash Flow Terminology e. Accounts Receivable f. Accounts Payable g. Balance Sheet h. Income Statement i. Taxes on Company Income j. Obtaining Financing k. Checking Account l. Financial Ratios | 8 |
| 5. Labor and Personnel a. ADA b. Labor Standards c. Requirements for Non-citizens and/or Non-residents d. Workers' Compensation e. Federal or State OSHA f. New Hires g. Personnel Record Keeping h. Other Requirements | 5 |
| 6. Risk Management a. Insurance b. Bonds | 4 |
| 7. Payroll and Payroll Taxes a. Taxes b. Forms and Due Dates | 5 |

| | | |
|----|--|---|
| 8. | Licensing Requirements a. Required Insurance/Bonds b. Renewal | 6 |
|----|--|---|

REFERENCE LIST

The reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge or general industry practices. Except for Code books, later editions of references are allowed in the test area. For Code questions, the examinations will be based only on the edition of the Code book that is listed.

Candidates may use a silent, non-printing, non-programmable calculator in the examination center. Candidates will also be provided with a magnifying glass upon request.

This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *State of Oklahoma, Construction Industries Board, Unofficial Administrative Rules & Courtesy Exam Study Aids Book*, current edition (available at the Construction Industries Board Office - no fee).
 - *Oklahoma Electrical Industry Regulations*, Oklahoma Administrative Code, Title 158, Chapter 40, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
 - *Oklahoma Fine Schedule of the Construction Industries Board*, Oklahoma Administrative Code, Title 158, Chapter 10, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
 - *Oklahoma Electrical License Act*, Oklahoma Statutes, Title 59, Chapter 40A, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
 - *Oklahoma Lien Law*, Oklahoma Statutes, Title 42, Chapter 3, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
 - *NASCLA Contractors' Guide to Business, Law and Project Management*, Basic 13th Edition National Association of State Contractors Licensing Agencies (NASCLA), 23309 N. 17th Drive, Phoenix, Arizona 85027, Telephone: (623) 587-9519, www.nascla.org
 - *Oklahoma Workers' Compensation Act*, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- OR**
Oklahoma Workers' Compensation Act Statutory Excerpts, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib

Candidates are responsible for bringing their own references to the examination center. Reference materials may be highlighted,



underlined, and/or indexed prior to the examination session. References may not be written in prior to or during the examination session. Any candidate caught writing in the references during the examination will have the references confiscated and will be reported to the department. Furthermore, candidates are not permitted to bring in any additional papers with their approved references. Any additional materials will be removed from the references and confiscated. References may be tabbed/indexed with permanent tabs only. Temporary tabs, such as Post-It notes, are not allowed and must be removed from the reference before the exam will begin. If you download a reference from the Internet, it must be spiral bound or hole-punched and placed in a binder or stapled in the left-hand corner.

LIMITED ELECTRICAL CONTRACTOR

SCOPE OF WORK

Tests a candidate's knowledge of the design, plan, layout, installation, repair and alteration of electrical conductors, fixtures, appliances, apparatus, raceways, conduit and related equipment and fixtures that use electrical energy for light, heat, power, data and communications.

100 Scored Items - 240 minutes - 75% Correct to Pass

Non-Scored Items - 15 Minutes

| Topic Information | # of Items |
|--|------------|
| 1. General Knowledge | 4 |
| <ul style="list-style-type: none"> a. Permits and Inspections b. Preservation of Structural Integrity c. Needs Analysis and Estimate | |
| 2. General Electrical Knowledge | 10 |
| <ul style="list-style-type: none"> a. Voltage, Current, and Resistance in Series, Parallel, and Combination Circuits b. Power Used in a Circuit c. Power Lost (called Heat Lost) in Any Circuit d. Fundamental AC Theory e. Fundamental Three-phase AC Theory f. Cost of Power Used in a Circuit g. Troubleshooting and Test Systems h. National Electrical Codebook i. Definitions Used by the NEC j. Temporary Wiring k. Cranes and Hoists l. Elevators and Escalators | |
| 3. Electrical Installation Requirements | 10 |
| <ul style="list-style-type: none"> a. Approved Methods of Installation of Electrical Equipment b. Approved Methods of Installation of Electrical Equipment in Excess of 600 volts | |
| 4. Services, Feeders, and Branch Circuits | 10 |
| <ul style="list-style-type: none"> a. Services b. Voltage Drop for Branch Circuits or Feeders c. Services in Excess of 600 volts d. Feeders e. Outside Branch Circuits and Feeders f. Branch Circuits g. Space-heating, Snow-melting, and Pipe-heating Circuits h. Air-conditioning and Refrigeration Equipment | |

| | |
|--|----|
| 5. Overcurrent Protection | 6 |
| <ul style="list-style-type: none"> a. NEC Overcurrent Protection Requirements | |
| 6. Grounding and Bonding | 10 |
| <ul style="list-style-type: none"> a. General Requirements b. Required Sizes of Grounding Electrode Conductors c. Required Sizes of Equipment Grounding Conductors | |
| 7. Conductors and Cables | 6 |
| <ul style="list-style-type: none"> a. Underground Conductors and Cables b. Vertical Installations c. Selecting Conductors d. Armored Cable, Type AC e. Metal-clad Cable, Type MC f. Nonmetallic-sheathed Cable, Types NM, NMC, NMS g. Service Entrance Cables, Types SE and USE h. Underground Feeder and Branch Circuit Cable, Type UF i. Mineral Insulated, Type MI j. Flat Cable Assemblies, Type FC, and Flat Conductor Cable, Type FCC k. Medium Voltage Cable, Type MV | |
| 8. Raceways and Boxes | 7 |
| <ul style="list-style-type: none"> a. General Raceway Requirements b. General Box Requirements c. Pull Boxes d. Conduit Fittings e. Type RMC (Rigid Metal Conduit) f. Type EMT (Electric Metallic Conduit) g. Type IMC (Intermediate Metal Conduit) h. Type RNC (Rigid Nonmetallic Conduit) i. Type FMC (Flexible Metal Conduit) j. Type LFMC (Liquid-tight Flexible Metal Conduit) k. Type FMT (Flexible Metallic Tubing) l. Type HDPE (High-density Polyethylene Conduit) m. Type NUCC (Nonmetallic Underground Conduit with Conductors) n. Type LFNC (Liquid-tight Flexible Nonmetallic conduit) o. Area of Raceway and Number of Conduct (Conduit Fill) p. Outlet, Device, Pull, and Junction Boxes q. Box Volume and Fill r. Auxiliary Gutters, Busways, Concrete and Nonconcrete Raceways s. Metal and Nonmetallic Wireways t. Surface Metal and Nonmetallic Raceways u. Underfloor Raceways v. Cabletrays | |
| 9. Special Occupancies and Equipment (Including Swimming Pools) | 10 |
| <ul style="list-style-type: none"> a. Wiring in Class I, II, and III Hazardous Locations b. Wiring in Commercial Garages and Fuel Dispensing Facilities c. Wiring in Bulk Storage Plants, Paint, and Spray Areas d. Special Occupancies e. Wiring in Health Facilities and Places of Assembly | |

| | | |
|-----|--|----|
| | <ul style="list-style-type: none"> f. Wiring of Mobile Home, Mobile Home Parks, RVs, and RV Parks g. Wiring of Floating Buildings h. Wiring to Swimming Pools, Fountains, and Hot Tubs | |
| 10. | Low Voltage, Alarms, Signaling Systems, and Communications <ul style="list-style-type: none"> a. Remote Control or Signaling Circuits b. Communication Circuits c. Equipment Operating at 50 volts or Less d. Fiber Optics e. Photovoltaics f. Remote Controls g. Fire Alarms h. Circuit Wiring for an Emergency System i. Communications Systems Wiring | 7 |
| 11. | Lighting and Signs <ul style="list-style-type: none"> a. Fixture Installation b. Fixture Grounding c. Fixture Wiring d. Fluorescent Fixtures e. Fixture Construction Requirements f. Recessed Fixtures g. Lighting Systems that Operate at Less Than 30 volts h. Neon Lighting and Electric Signs | 10 |
| 12. | Safety <ul style="list-style-type: none"> a. Job Site Sanitation b. Responsibility for Providing Personal Protective Equipment c. Excavation Safety d. Emergency Action Plans e. Safety Training Requirements f. Ventilation g. First Aid Kit Requirements h. Use of Personal Protective Equipment i. Signs, Signals, and Barricades j. Tools and Equipment k. Ladders l. Workplace Illumination m. Scaffolds n. Requirements for Work Around Toxic Materials o. Material Cleanup and Disposal p. Material Safety Data Sheets (MSDS) q. Handling and Storing Materials r. Fall Protection | 4 |
| 13. | Motors and Transformers <ul style="list-style-type: none"> a. Motors Used in Dwellings b. Motor Branch Circuits in Industrial and Commercial Locations c. Feeder Transformers d. Use of Transformers | 6 |

Candidates may use a silent, non-printing, non-programmable calculator in the examination center. Candidates will also be provided with a magnifying glass upon request.

This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *NFPA 70 - National Electrical Code, 2014 or 2017 Edition, as revised and adopted by the Oklahoma Uniform Building Code Commission, National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-9101, (800) 344-3555, www.nfpa.org. NEC Handbooks and spiral-bound copies of the National Electrical Code will NOT be allowed in the test center. **The 2017 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2014 code will no longer be allowed***

- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA), with latest available amendments, **Candidates can access the Government website with this link <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>***

Hard copy can be purchased from Mancomm.com. <https://mancomm.com/29-cfr-1926-osha-construction-industry-regulations-standards/>. Amazon and other retailers sell the Mancomm OSHA publications.

OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psiolinestore.com>

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UNLIMITED ELECTRICAL CONTRACTOR

SCOPE OF WORK

Tests a candidate's knowledge of the design, plan, layout, installation, repair and alteration of electrical conductors, fixtures, appliances, apparatus, raceways, conduit and related equipment and fixtures that use electrical energy for light, heat, power, data and communications.



100 Scored Items - 240 minutes - 75% Correct to Pass

Non-Scored Items - 15 Minutes

| Topic Information | # of Items |
|--|------------|
| 1. General Knowledge a. Permits and Inspections b. Preservation of Structural Integrity c. Needs Analysis and Estimate | 4 |
| 2. General Electrical Knowledge a. Voltage, Current, and Resistance in Series, Parallel, and Combination Circuits b. Power Used in a Circuit c. Power Lost (called Heat Lost) in Any Circuit d. Fundamental AC Theory e. Fundamental Three-phase AC Theory f. Cost of Power Used in a Circuit g. Troubleshooting and Test Systems h. National Electrical Codebook i. Definitions Used by the NEC j. Temporary Wiring k. Cranes and Hoists l. Elevators and Escalators | 10 |
| 3. Electrical Installation Requirements a. Approved Methods of Installation of Electrical Equipment b. Approved Methods of Installation of Electrical Equipment in Excess of 600 volts | 10 |
| 4. Services, Feeders, and Branch Circuits a. Services b. Voltage Drop for Branch Circuits or Feeders c. Services in Excess of 600 volts d. Feeders e. Outside Branch Circuits and Feeders f. Branch Circuits g. Space-heating, Snow-melting, and Pipe-heating Circuits h. Air-conditioning and Refrigeration Equipment | 10 |
| 5. Overcurrent Protection a. NEC Overcurrent Protection Requirements | 6 |
| 6. Grounding and Bonding a. General Requirements b. Required Sizes of Grounding Electrode Conductors c. Required Sizes of Equipment Grounding Conductors | 10 |
| 7. Conductors and Cables a. Underground Conductors and Cables b. Vertical Installations c. Selecting Conductors d. Armored Cable, Type AC e. Metal-clad Cable, Type MC f. Nonmetallic-sheathed Cable, Types NM, NMC, NMS g. Service Entrance Cables, Types SE and USE h. Underground Feeder and Branch Circuit Cable, Type UF i. Mineral Insulated, Type MI j. Flat Cable Assemblies, Type FC, and Flat Conductor Cable, Type FCC k. Medium Voltage Cable, Type MV | 6 |

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|--|----|
| 8. Raceways and Boxes a. General Raceway Requirements b. General Box Requirements c. Pull Boxes d. Conduit Fittings e. Type RMC (Rigid Metal Conduit) f. Type EMT (Electric Metallic Conduit) g. Type IMC (Intermediate Metal Conduit) h. Type RNC (Rigid Nonmetallic Conduit) i. Type FMC (Flexible Metal Conduit) j. Type LFMC (Liquid-tight Flexible Metal Conduit) k. Type FMT (Flexible Metallic Tubing) l. Type HDPE (High-density Polyethylene Conduit) m. Type NUCC (Nonmetallic Underground Conduit with Conductors) n. Type LFNC (Liquid-tight Flexible Nonmetallic conduit) o. Area of Raceway and Number of Conduct (Conduit Fill) p. Outlet, Device, Pull, and Junction Boxes q. Box Volume and Fill r. Auxiliary Gutters, Busways, Concrete and Nonconcrete Raceways s. Metal and Nonmetallic Wireways t. Surface Metal and Nonmetallic Raceways u. Underfloor Raceways v. Cabletrays | 7 |
| 9. Special Occupancies and Equipment (Including Swimming Pools) a. Wiring in Class I, II, and III Hazardous Locations b. Wiring in Commercial Garages and Fuel Dispensing Facilities c. Wiring in Bulk Storage Plants, Paint, and Spray Areas d. Special Occupancies e. Wiring in Health Facilities and Places of Assembly f. Wiring of Mobile Home, Mobile Home Parks, RVs, and RV Parks g. Wiring of Floating Buildings h. Wiring to Swimming Pools, Fountains, and Hot Tubs | 10 |
| 10. Low Voltage, Alarms, Signaling Systems, and Communications a. Remote Control or Signaling Circuits b. Communication Circuits c. Equipment Operating at 50 volts or Less d. Fiber Optics e. Photovoltaics f. Remote Controls g. Fire Alarms h. Circuit Wiring for an Emergency System i. Communications Systems Wiring | 7 |
| 11. Lighting and Signs a. Fixture Installation b. Fixture Grounding c. Fixture Wiring d. Fluorescent Fixtures e. Fixture Construction Requirements f. Recessed Fixtures g. Lighting Systems that Operate at Less Than 30 volts h. Neon Lighting and Electric Signs | 10 |

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|-----|--|---|
| 12. | Safety | 4 |
| | <ul style="list-style-type: none"> a. Job Site Sanitation b. Responsibility for Providing Personal Protective Equipment c. Excavation Safety d. Emergency Action Plans e. Safety Training Requirements f. Ventilation g. First Aid Kit Requirements h. Use of Personal Protective Equipment i. Signs, Signals, and Barricades j. Tools and Equipment k. Ladders l. Workplace Illumination m. Scaffolds n. Requirements for Work Around Toxic Materials o. Material Cleanup and Disposal p. Material Safety Data Sheets (MSDS) q. Handling and Storing Materials r. Fall Protection | |
| 13. | Motors and Transformers | 6 |
| | <ul style="list-style-type: none"> a. Motors Used in Dwellings b. Motor Branch Circuits in Industrial and Commercial Locations c. Feeder Transformers d. Use of Transformers | |

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UNLIMITED ELECTRICAL JOURNEYMAN

SCOPE OF WORK

Tests a candidate's knowledge of the design, plan, layout, installation, repair and alteration of electrical conductors, fixtures, appliances, apparatus, raceways, conduit and related equipment and fixtures that use electrical energy for light, heat, power, data and communications in a supervised environment.

100 Scored Items - 240 minutes - 75% Correct to Pass

Non-Scored Items - 15 Minutes

| Topic Information | # of Items |
|--|------------|
| 1. General Knowledge | 4 |
| <ul style="list-style-type: none"> a. Permits and Inspections b. Preservation of Structural Integrity c. Needs Analysis and Estimate | |
| 2. General Electrical Knowledge | 10 |
| <ul style="list-style-type: none"> a. Voltage, Current, and Resistance in Series, Parallel, and Combination Circuits b. Power Used in a Circuit c. Power lost (called Heat Lost) in Any Circuit d. Fundamental AC Theory e. Fundamental Three-phase AC Theory f. Cost of Power Used in a Circuit g. Troubleshooting and Test Systems h. National Electrical Codebook i. Definitions Used by the NEC j. Temporary Wiring k. Cranes and Hoists l. Elevators and Escalators | |
| 3. Electrical Installation Requirements | 10 |
| <ul style="list-style-type: none"> a. Approved Methods of Installation of Electrical Equipment b. Approved Methods of Installation of Electrical Equipment in Excess of 600 volts | |



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| 4. | Services, Feeders, and Branch Circuits | 10 |
| | <ul style="list-style-type: none"> a. Services b. Voltage Drop for Branch Circuits or Feeders c. Services in Excess of 600 volts d. Feeders e. Outside Branch Circuits and Feeders f. Branch Circuits g. Space-heating, Snow-melting, and Pipe-heating Circuits h. Air-conditioning and Refrigeration Equipment | |
| 5. | Overcurrent Protection | 6 |
| | <ul style="list-style-type: none"> a. NEC Overcurrent Protection Requirements | |
| 6. | Grounding and Bonding | 10 |
| | <ul style="list-style-type: none"> a. General Requirements b. Required Sizes of Grounding Electrode Conductors c. Required Sizes of Equipment Grounding Conductors | |
| 7. | Conductors and Cables | 6 |
| | <ul style="list-style-type: none"> a. Underground Conductors and Cables b. Vertical Installations c. Selecting Conductors d. Armored Cable, Type AC e. Metal-clad Cable, Type MC f. Nonmetallic-sheathed Cable, Types NM, NMC, NMS g. Service Entrance Cables, Types SE and USE h. Underground Feeder and Branch Circuit Cable, Type UF i. Mineral Insulated, Type MI j. Flat Cable Assemblies, Type FC, and Flat Conductor Cable, Type FCC k. Medium Voltage Cable, Type MV | |
| 8. | Raceways and Boxes | 7 |
| | <ul style="list-style-type: none"> a. General Raceway Requirements b. General Box Requirements c. Pull Boxes d. Conduit Fittings e. Type RMC (Rigid Metal Conduit) f. Type EMT (Electric Metallic Conduit) g. Type IMC (Intermediate Metal Conduit) h. Type RNC (Rigid Nonmetallic Conduit) i. Type FMC (Flexible Metal Conduit) j. Type LFMC (Liquid-tight Flexible Metal Conduit) k. Type FMT (Flexible Metallic Tubing) l. Type HDPE (High-density Polyethylene Conduit) m. Type NUCC (Nonmetallic Underground Conduit with Conductors) n. Type LFNC (Liquid-tight Flexible Nonmetallic Conduit) o. Area of Raceway and Number of Conduct (Conduit Fill) p. Outlet, Device, Pull, and Junction Boxes q. Box Volume and Fill r. Auxiliary Gutters, Busways, Concrete and Nonconcrete Raceways s. Metal and Nonmetallic Wireways t. Surface Metal and Nonmetallic Raceways u. Underfloor Raceways v. Cabletrays | |

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|-----|--|----|
| 9. | Special Occupancies and Equipment (Including Swimming Pools) | 10 |
| | <ul style="list-style-type: none"> a. Wiring in Class I, II, and III Hazardous Locations b. Wiring in Commercial Garages and Fuel Dispensing Facilities c. Wiring in Bulk Storage Plants, Paint, and Spray Areas d. Special Occupancies e. Wiring in Health Facilities and Places of Assembly f. Wiring of Mobile Home, Mobile Home Parks, RVs, and RV Parks g. Wiring of Floating Buildings h. Wiring to Swimming Pools, Fountains, and Hot Tubs | |
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| 11. | Lighting and Signs | 10 |
| | <ul style="list-style-type: none"> a. Fixture Installation b. Fixture Grounding c. Fixture Wiring d. Fluorescent Fixtures e. Fixture Construction Requirements f. Recessed Fixtures g. Lighting Systems that Operate at Less Than 30 volts h. Neon Lighting and Electric Signs | |
| 12. | Safety | 4 |
| | <ul style="list-style-type: none"> a. Job Site Sanitation b. Responsibility for Providing Personal Protective Equipment c. Excavation Safety d. Emergency Action Plans e. Safety Training Requirements f. Ventilation g. First Aid Kit Requirements h. Use of Personal Protective Equipment i. Signs, Signals, and Barricades j. Tools and Equipment k. Ladders l. Workplace Illumination m. Scaffolds n. Requirements for Work Around Toxic Materials o. Material Cleanup and Disposal p. Material Safety Data Sheets (MSDS) q. Handling and Storing Materials r. Fall Protection | |
| 13. | Motors and Transformers | 6 |
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SCOPE OF WORK

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80 Scored Items - 210 minutes - 75% Correct to Pass

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| 3. Electrical Installation Requirements a. Approved Methods of Installation of Electrical Equipment b. Approved Methods of Installation of Electrical Equipment in Excess of 600 volts | 10 |
| 4. Services, Feeders, and Branch Circuits a. Services b. Voltage Drop for Branch Circuits or Feeders c. Services in Excess of 600 volts d. Feeders e. Outside Branch Circuits and Feeders f. Branch Circuits g. Space-heating, Snow-melting, and Pipe-heating Circuits h. Air-conditioning and Refrigeration Equipment | 10 |
| 5. Overcurrent Protection a. NEC Overcurrent Protection Requirements | 6 |
| 6. Grounding and Bonding a. General Requirements b. Grounding Electrode Conductors c. Equipment Grounding Conductors | 8 |
| 7. Conductors and Cables a. Install Underground Conductors and Cables b. Perform Vertical Installations c. Select Conductor d. Armored Cable, Type AC | 6 |

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| | <ul style="list-style-type: none"> e. Metal-clad Cable, Type MC f. Nonmetallic-sheathed Cable, Types NM, NMC, NMS g. Service Entrance Cables, Types SE and USE h. Underground Feeder and Branch Circuit Cable, Type UF i. Mineral Insulated, Type MI j. Flat Cable Assemblies, Type FC, and Flat Conductor Cable, Type FCC k. Medium Voltage Cable, Type MV | |
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| 9. | Special Occupancies and Equipment (Including Swimming Pools) <ul style="list-style-type: none"> a. Wiring of Mobile Home, Mobile Home Parks, RVs, and RV Parks b. Required Wiring to Swimming Pools, Fountains, and Hot Tubs | 4 |
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| 12. | Safety <ul style="list-style-type: none"> a. Job Site Sanitation b. Responsibility for Providing Personal Protective Equipment c. Excavation Safety d. Emergency Action Plans e. Safety Training Requirements f. Ventilation g. First Aid Kit Requirements h. Use of Personal Protective Equipment i. Signs, Signals, and Barricades j. Tools and Equipment k. Ladders l. Workplace Illumination m. Scaffolds n. Requirements for Work Around Toxic Materials o. Material Cleanup and Disposal p. Material Safety Data Sheets (MSDS) q. Handling and Storing Materials r. Fall Protection | 4 |
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| | <ul style="list-style-type: none"> a. Wiring of Mobile Home, Mobile Home Parks, RVs, and RV Parks b. Required Wiring to Swimming Pools, Fountains, and Hot Tubs | |

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| 11. | Lighting and Signs a. Fixtures Installation b. Fixtures Grounding c. Fixture Wiring d. Fluorescent Fixtures e. Fixture Construction Requirements f. Recessed Fixtures g. Lighting Systems that Operate at Less Than 30 volts | 4 |
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www.nfpa.org. NEC Handbooks and spiral-bound copies of the National Electrical Code will NOT be allowed in the test center. **The 2017 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2014 code will no longer be allowed**

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Hard copy can be purchased from Mancomm.com. <https://mancomm.com/29-cfr-1926-osha-construction-industry-regulations-standards/>. Amazon and other retailers sell the Mancomm OSHA publications.

OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psiolinestore.com>

- *Ugly's Electrical References*, George V. Hart, any edition may be used, Jones and Bartlett, (800) 832-0034, www.uglys.net

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This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *NFPA 70 - National Electrical Code*, 2014 or 2017 Edition, as revised and adopted by the Oklahoma Uniform Building Code Commission, National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, MA 02169-9101, (800) 344-3555,

RESIDENTIAL JOURNEYMAN PLUMBING AND NATURAL GAS

85 Scored Items - 180 minutes - 75% Correct to Pass

| Topic Information | # of Items |
|--|------------|
| 1. General Plumbing Knowledge and Regulations a. Calculate Area and Volume b. General Code Requirements c. Plumbing Definitions d. Notches and Holes in Structural Members e. Test Systems f. Water Column g. Pipe Offsets | 10 |
| 2. Piping, Valves, and Control Valves a. Piping Connections b. Cast Iron Piping c. Copper Piping and Tubing d. Steel Piping e. PVC, CPVC, Plastic and PEX Piping | 8 |



| | | |
|-----|--|----|
| | f. Valves | |
| 3. | Fixtures and Equipment a. Fixture Installation b. Install Water Heaters c. Requirements for Fixtures | 8 |
| 4. | Water Supply a. Water Supply and Distribution Lines b. Protection of Potable Water Supply c. Backflow | 10 |
| 5. | Drains and Sewers a. Drain and Sewer Pipe b. Building Sewers c. Sewer and Drain Cleanouts d. DFUs e. Drain and Water Piping | 10 |
| 6. | Vents a. Vent Installation b. Wet Venting | 13 |
| 7. | Traps, Interceptors, Indirect, and Special Waste a. Ejector Pumps b. Indirect Waste c. Traps | 5 |
| 8. | Isometric Analysis a. Isometric Drawings | 7 |
| 9. | Fuel Gas a. Gas Piping Conduit b. General Gas Piping and Valves c. Piping Supports and Hangars d. Pipe Sizing e. Testing f. Installation and Joining Gas Pipe g. Threads | 10 |
| 10. | Safety a. Construction Activities b. Ladders c. Fall Arrest Systems | 4 |

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The following reference materials are allowed in the examination center:

- *International Residential Code*, 2015 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes_& Rules/Adopted_Building_Codes/

- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, *Candidates can access the Government website with this link* <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

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OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psiolinestore.com>

- *Mathematics for Plumbers and Pipefitters*, Lee Smith, 8th Edition, 2013, www.cengage.com

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REFINERY ELECTRICAL JOURNEYMAN

SCOPE OF WORK

100 Scored Items - 240 minutes - 75% Correct to Pass

| Topic Information | # of Items |
|---|------------|
| 1. General Electrical Knowledge | 10 |
| a. Permits and Inspections | |
| b. Preservation of Structural Integrity | |
| c. Needs Analysis and Estimate | |
| d. Voltage, Current, and Resistance in Series, Parallel, and Combination Circuits | |
| e. Power Used in a Circuit | |
| f. Power lost (called Heat Lost) in Any Circuit | |
| g. Fundamental AC Theory | |
| h. Fundamental Three-phase AC Theory | |
| i. Cost of Power Used in a Circuit | |
| j. Troubleshooting and Test Systems | |
| k. National Electrical Codebook | |
| l. Definitions Used by the NEC | |
| m. Temporary Wiring | |
| n. Cranes and Hoists | |
| o. Elevators and Escalators | |



| | | |
|----|--|----|
| 2. | Electrical Installation Requirements a. Approved Methods of Installation of Electrical Equipment b. Approved Methods of Installation of Electrical Equipment in Excess of 600 volts | 4 |
| 3. | Services, Feeders, and Branch Circuits a. Services b. Voltage Drop for Branch Circuits or Feeders c. Services in Excess of 600 volts d. Feeders e. Outside Branch Circuits and Feeders f. Branch Circuits g. Space-heating, Snow-melting, and Pipe-heating Circuits h. Air-conditioning and Refrigeration Equipment | 6 |
| 4. | Overcurrent Protection a. NEC Overcurrent Protection Requirements | 6 |
| 5. | Grounding and Bonding a. General Requirements b. Required Sizes of Grounding Electrode Conductors c. Required Sizes of Equipment Grounding Conductors | 10 |
| 6. | Conductors and Cables a. Underground Conductors and Cables b. Vertical Installations c. Selecting Conductors d. Armored Cable, Type AC e. Metal-clad Cable, Type MC f. Nonmetallic-sheathed Cable, Types NM, NMC, NMS g. Service Entrance Cables, Types SE and USE h. Underground Feeder and Branch Circuit Cable, Type UF i. Mineral Insulated, Type MI j. Flat Cable Assemblies, Type FC, and Flat Conductor Cable, Type FCC k. Medium Voltage Cable, Type MV | 6 |
| 7. | Raceways and Boxes a. General Raceway Requirements b. General Box Requirements c. Pull Boxes d. Conduit Fittings e. Type RMC (Rigid Metal Conduit) f. Type EMT (Electric Metallic Conduit) g. Type IMC (Intermediate Metal Conduit) h. Type RNC (Rigid Nonmetallic Conduit) i. Type FMC (Flexible Metal Conduit) j. Type LFMC (Liquid-tight Flexible Metal Conduit) k. Type FMT (Flexible Metallic Tubing) l. Type HDPE (High-density Polyethylene Conduit) m. Type NUCC (Nonmetallic Underground Conduit with Conductors) n. Type LFNC (Liquid-tight Flexible Nonmetallic Conduit) o. Area of Raceway and Number of Conduct (Conduit Fill) p. Outlet, Device, Pull, and Junction Boxes q. Box Volume and Fill r. Auxiliary Gutters, Busways, Concrete and Nonconcrete Raceways | 6 |

| | | |
|-----|---|----|
| | s. Metal and Nonmetallic Wireways t. Surface Metal and Nonmetallic Raceways u. Underfloor Raceways v. Cabletrays | |
| 8. | Low Voltage, Alarms, Signaling Systems, and Communications a. Remote Control or Signaling Circuits b. Communication Circuits c. Equipment Operating at 50 volts or Less d. Fiber Optics e. Photovoltaics f. Remote Controls g. Fire Alarms h. Circuit Wiring for an Emergency System i. Communications Systems Wiring | 4 |
| 9. | Lighting and Signs a. Fixture Installation b. Fixture Grounding c. Fixture Wiring d. Fluorescent Fixtures e. Fixture Construction Requirements f. Recessed Fixtures g. Lighting Systems that Operate at Less Than 30 volts h. Neon Lighting and Electric Signs | 4 |
| 10. | Safety a. Job Site Sanitation b. Responsibility for Providing Personal Protective Equipment c. Excavation Safety d. Emergency Action Plans e. Safety Training Requirements f. Ventilation g. First Aid Kit Requirements h. Use of Personal Protective Equipment i. Signs, Signals, and Barricades j. Tools and Equipment k. Ladders l. Workplace Illumination m. Scaffolds n. Requirements for Work Around Toxic Materials o. Material Cleanup and Disposal p. Material Safety Data Sheets (MSDS) q. Handling and Storing Materials r. Fall Protection | 5 |
| 11. | Motors and Transformers a. Motors Used in Dwellings b. Motor Branch Circuits in Industrial and Commercial Locations c. Feeder Transformers d. Use of Transformers | 4 |
| 12. | Hazardous Locations a. Hazardous Location Classifications b. Hazardous Materials c. Equipment used in Hazardous Locations d. Ventilation and Seals e. Underground Wiring f. Fuel Dispensing Location Requirements | 35 |

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- Ugly's Electrical References, George V. Hart, any edition may be used, Jones and Bartlett, (800) 832-0034, www.uglys.net
- Hazardous Locations, 2005, International Association of Electrical Inspectors, (800) 786-4234, www.iaei.org

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MECHANICAL BUSINESS AND LAW

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 50 | 70 | 35 | 120 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Bidding and Estimating a. General Estimating b. Bid | 10 |
| 2. Project Management and Supervision a. General Project Oversight b. Oversee Budget | 7 |

| | | |
|----|---|---|
| | <ul style="list-style-type: none"> c. Oversee Quality Control d. Oversee Materials Control e. Manage Jobsite Safety f. Schedule g. Potentially Hazardous Materials h. Environmental Protection i. Submittals and Reports j. Ethics k. Liens | |
| 3. | Contracts <ul style="list-style-type: none"> a. Terminology b. Required Elements/Components c. Contract Types d. Change Orders e. Standardized Documents f. Interpretation g. Warranties h. Documents/Inclusions i. Other Obligations | 5 |
| 4. | Financial <ul style="list-style-type: none"> a. Business Organization Characteristics, Advantages, and Disadvantages b. Business Start-up c. Accounting method d. Cash Flow Terminology e. Accounts Receivable f. Accounts Payable g. Balance Sheet h. Income Statement i. Taxes on Company Income j. Obtaining Financing k. Checking Account l. Financial Ratios | 8 |
| 5. | Labor and Personnel <ul style="list-style-type: none"> a. ADA b. Labor Standards c. Requirements for Non-citizens and/or Non-residents d. Workers' Compensation e. Federal or State OSHA f. New Hires g. Personnel Record Keeping h. Other Requirements | 5 |
| 6. | Risk Management <ul style="list-style-type: none"> a. Insurance b. Bonds | 4 |
| 7. | Payroll and Payroll Taxes <ul style="list-style-type: none"> a. Taxes b. Forms and Due Dates | 5 |
| 8. | Licensing Requirements <ul style="list-style-type: none"> a. Required Insurance/Bonds b. Renewal | 6 |

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This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *State of Oklahoma, Construction Industries Board, Unofficial Administrative Rules & Courtesy Exam Study Aids Book*, current edition (available at the Construction Industries Board Office - no fee).
- *Oklahoma Mechanical Licensing Act*, Oklahoma Statutes, Title 59, Chapter 43A, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Mechanical Industry Regulations*, Oklahoma Administrative Code, Title 158, Chapter 50, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Fine Schedule of the Construction Industries Board*, Oklahoma Administrative Code, Title 158, Chapter 10, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Lien Law*, Oklahoma Statutes, Title 42, Chapter 3, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *NASCLA Contractors' Guide to Business, Law and Project Management*, Basic 13th Edition National Association of State Contractors Licensing Agencies (NASCLA), 23309 N. 17th Drive, Phoenix, Arizona 85027, Telephone: (623) 587-9519, www.nascla.org
- Oklahoma Workers' Compensation Act, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
OR
Oklahoma Workers' Compensation Act Statutory Excerpts, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib

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NATURAL GAS CONTRACTOR

SCOPE OF WORK

Tests the candidate's knowledge on the installation, repair, alteration or extension of gas piping and gas mains.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 40 | 70 | 28 | 120 minutes |

| Topic Information | | # of Items |
|-------------------|---|------------|
| 1. | General Fuel Gas Piping -- Knowledge, Definitions, and Regulations a. Testing and Inspection b. Pipe Material Properties and Requirements | 10 |
| 2. | Pipe Sizing | 12 |
| 3. | Pipe Installation a. Indoor and Outdoor Installation Requirements b. Gas Pressure Regulators c. Structural Safety d. Hangers and Supports e. Direction Changes f. Concealed Locations g. Joints and Connections h. Valves and Controls i. Outlets j. Drip Legs and Sediment Traps k. Piping Protection | 15 |
| 4. | Safety a. Sanitation b. Contractor Responsibilities c. Excavation Safety d. Ventilation and Confined Space e. Safety Training f. First Aid Kits g. PPE h. Signs, Signals and Barricades i. Fall Protection j. Ladders and Scaffolds k. Tools and Equipment l. MSDS | 3 |

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The following reference materials are allowed in the examination center:

- *International Fuel Gas Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes_& Rules/Adopted_Building_Codes/ The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed.

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NATURAL GAS JOURNEYMAN

SCOPE OF WORK

Tests the candidate's knowledge on the installation, repair, alteration or extension of gas piping and gas mains.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 30 | 70 | 21 | 90 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. General Fuel Gas Piping -- Knowledge, Definitions, and Regulations a. Testing and Inspection b. Pipe Material Properties and Requirements | 8 |
| 2. Pipe Sizing | 4 |
| 3. Pipe Installation a. Indoor and Outdoor Installation Requirements | 15 |

| | |
|-----------|---|
| | <ul style="list-style-type: none"> b. Gas Pressure Regulators c. Structural Safety d. Hangers and Supports e. Direction Changes f. Concealed Locations g. Joints and Connections h. Valves and Controls i. Outlets j. Drip Legs and Sediment Traps k. Piping Protection |
| 4. Safety | <ul style="list-style-type: none"> a. Excavations b. Ventilation and Confined Space c. PPE d. Signs, Signals and Barricades e. Fall Protection f. Ladders and Scaffolds g. Tools and Equipment h. MSDS |

3

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j. Ladders and Scaffolds

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OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psionlinestore.com>

- *Facility Piping Systems Handbook*, Second Edition, 2002, McGraw-Hill Publishing, Inc., PO Box 182604, Columbus, OH 43272, (800) 338-3987, www.mhprofessional.com
- *International Mechanical Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/ The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed.
- *Mathematics for Plumbers and Pipefitters*, Lee Smith, 8th Edition, 2013, www.cengage.com
- *ASME A13.1: Scheme for the Identification of Piping Systems*, 2007, American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10065, (800) 843-2763, www.asme.org
- *ASME B31.3-2004: Process Piping*, 2004, American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10065, (800) 843-2763, www.asme.org

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PROCESS PIPING CONTRACTOR

SCOPE OF WORK

Tests the candidate's knowledge on the installation, repair, alteration or extension of the piping and tubing which conveys liquids or gases which is used directly in research, laboratory, or production processes.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 40 | 70 | 28 | 120 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. General Knowledge and Definitions | 6 |
| 2. Estimating and Plan Reading <ol style="list-style-type: none"> Plan Reading Offset Calculations Material Estimates | 7 |
| 3. Pipe Materials, Uses, and Properties <ol style="list-style-type: none"> Material Properties and Selection Pipe Sizing | 5 |
| 4. Piping Installation and Fitting <ol style="list-style-type: none"> Indoor and Outdoor Piping Pipe Welding Pipe Brazing and Soldering Mechanical Joints Threaded Joints Compression Fittings Chemical Adhesives Tube Bending System Testing Line Labeling | 8 |
| 5. Hangers and Supports <ol style="list-style-type: none"> Measure and Install Pipe Supports | 5 |
| 6. Valves and Controls <ol style="list-style-type: none"> Valve Selection Valve and Control Installation Maintenance and Troubleshooting | 6 |
| 7. Safety <ol style="list-style-type: none"> Contractor Responsibilities Safety Training Ventilation and Confined Space First Aid Kits Personal Protective Equipment (PPE) Material Safety Data Sheets (MSDS) Toxic Materials Fall Protection Lockout/Tagout | 3 |



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PROCESS PIPING JOURNEYMAN

SCOPE OF WORK

Tests the candidate's knowledge on the installation, repair, alteration or extension of the piping and tubing which conveys liquids or gases which is used directly in research, laboratory, or production processes only while in the employ of a process piping contractor.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 35 | 70 | 25 | 120 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. General Knowledge and Definitions | 6 |
| 2. Plan Reading | 3 |
| 3. Pipe Materials, Uses, and Properties <ul style="list-style-type: none"> a. Material Properties and Selection b. Pipe Sizing | 5 |
| 4. Piping Installation and Fitting <ul style="list-style-type: none"> a. Indoor and Outdoor Piping b. Pipe Welding c. Pipe Brazing and Soldering d. Mechanical Joints e. Threaded Joints f. Compression Fittings g. Chemical Adhesives h. Tube Bending i. System Testing j. Line Labeling | 8 |
| 5. Hangers and Supports <ul style="list-style-type: none"> a. Measure and Install Pipe Supports | 5 |
| 6. Valves and Controls <ul style="list-style-type: none"> a. Valve Selection b. Valve and Control Installation c. Maintenance and Troubleshooting | 5 |
| 7. Safety <ul style="list-style-type: none"> a. Ventilation and Confined Space b. Personal Protective Equipment (PPE) c. Material Safety Data Sheets (MSDS) d. Toxic Materials e. Fall Protection f. Lockout/Tagout g. Ladders and Scaffolds | 3 |

REFERENCE LIST

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This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *Pipefitter's Handbook*, 1967, 3rd Edition, Forest R. Linsey, Industrial Press, Inc., www.industrialpress.com

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SHEET METAL CONTRACTOR

SCOPE OF WORK

Those who are qualified to manufacture, assemble, cast, cut, shape, forge, fabricate, weld, repair, recondition, adjust and install sheet rolled metal of any kind or combination and all other air-conveyor systems and air handling systems regardless of materials used, including all equipment and all reinforcements in connection therewith.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 60 | 70 | 42 | 120 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. General Knowledge <ul style="list-style-type: none"> a. Tools and Equipment b. Materials c. Welding d. Blueprints and Plan Reading e. Air Properties and Behavior f. Testing, Adjusting and Balancing (TAB) | 13 |
| 2. Duct Sizing, Design, and Hanging and Support Requirements <ul style="list-style-type: none"> a. Duct Sizing b. Duct Design | 6 |

| | | |
|----|--|----|
| | c. Hangers and Supports | |
| 3. | Duct Fabrication and Installation a. Rectangular Metal Ducts b. Oval and Flexible Metal Ducts c. Fiberglass Ducts d. Duct Accessories and Exterior Components | 13 |
| 4. | Plenums | 6 |
| 5. | Appliance Venting and Combustion Air a. Venting and Combustion Air Sizing b. Clearance to Combustibles c. Equipment Installation d. Vent and Combustion Air Supply Termination | 5 |
| 6. | Ventilation and Exhaust Devices a. Device Selection and Installation b. Exhaust Ducts c. Exhaust System Terminations d. Exhaust Fans e. Auxiliary Equipment f. Solid Fuel Systems g. Downdraft Appliance Ventilation | 14 |
| 7. | Safety a. Contractor Responsibilities b. Safety Training c. First Aid Kits d. Personal Protective Equipment (PPE) e. Signs, Signals, and Barricades f. Ladders g. Fall Protection h. Lockout/Tagout i. MSDS | 3 |

Manufacturers Association (NAIMA), 44 Canal Center Plaza, Suite 310, Alexandria, VA 22314, (703) 684-0084, www.naima.org

- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, *Candidates can access the Government website with this link* <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

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OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psionlinestore.com>

- *HVAC Duct Construction Standards, Metal and Flexible*, 2005, 3rd edition, Sheet Metal and Air Conditioning Contractors' National Association, Inc., (703) 803-2980, www.smacna.org
- *Sheet Metal*, 1995 Edition, American Technical Publishers (ATP), 1155 West 175th Street, Homewood, IL 60430-4600, (800) 323-3471, www.americantech.net

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- *International Mechanical Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/. **The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed**
- *Fibrous Glass Duct Construction Standards*, Fifth Edition, 2002, North American Insulation

SHEET METAL JOURNEYMAN

SCOPE OF WORK

Those who are qualified to fabricate, install, repair, alter, or extend sheet metal work while employed or supervised by a sheet metal contractor.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 50 | 70 | 35 | 120 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. General Knowledge | 12 |
| a. Tools and Equipment | |
| b. Materials | |
| c. Welding | |
| d. Blueprints and Plan Reading | |
| e. Air Properties and Behavior | |
| f. Testing, Adjusting and Balancing (TAB) | |



| | | |
|----|--|----|
| 2. | Duct Sizing, Design, and Hanging and Support Requirements a. Duct Sizing b. Duct Design c. Hangers and Supports | 4 |
| 3. | Duct Fabrication and Installation a. Rectangular Metal Ducts b. Oval and Flexible Metal Ducts c. Fiberglass Ducts d. Duct Accessories and Exterior Components | 10 |
| 4. | Plenums | 4 |
| 5. | Appliance Venting and Combustion Air a. Venting and Combustion Air Sizing b. Clearance to Combustibles c. Equipment Installation d. Vent and Combustion Air Supply Termination | 5 |
| 6. | Ventilation and Exhaust Devices a. Device Selection and Installation b. Exhaust Ducts c. Exhaust System Terminations d. Exhaust Fans e. Auxiliary Equipment f. Solid Fuel Systems g. Downdraft Appliance Ventilation | 12 |
| 7. | Safety a. Contractor Responsibilities b. Safety Training c. First Aid Kits d. Personal Protective Equipment (PPE) e. Signs, Signals and Barricades f. Ladders g. Fall Protection h. Lockout/Tagout i. MSDS | 3 |

9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed

- *Fibrous Glass Duct Construction Standards*, Fifth Edition, 2002, North American Insulation Manufacturers Association (NAIMA), 44 Canal Center Plaza, Suite 310, Alexandria, VA 22314, (703) 684-0084, www.naima.org
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HVACR CONTRACTOR, LIMITED

SCOPE OF WORK

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration or extension of air conditioning, refrigeration, heating, and ventilation, including ductwork, within a complete system limited to twenty-five tons cooling and five-hundred thousand BTU heating, and related appurtenances, apparatus, piping vessels, ducts and insulation.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 80 | 70 | 56 | 210 minutes |



| Topic Information | # of Items |
|--|------------|
| 1. Electrical Knowledge and Controls a. General Electrical Theory and Knowledge b. Motors c. D/C Circuits d. A/C Circuits e. Controls | 15 |
| 2. Natural Gas a. Piping Valves b. Connectors c. Accessories d. Hangers and Supports e. Sizing f. Materials g. Testing | 12 |
| 3. Air Distribution Systems a. Duct Definitions b. Sizing and Design c. Duct Assembly and Installation d. Hangers and Supports e. Duct Materials and Shapes f. Duct Insulation g. Fire and Smoke Control h. Hoods and Exhaust Systems i. Testing and Balancing j. Ventilation Requirements k. Plans and Symbols | 15 |
| 4. Refrigeration and Air Conditioning Systems a. Theory b. Refrigerants c. Equipment Sizing and Design d. Equipment and Components e. Piping f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance | 20 |
| 5. Heating Systems a. Heating Theory and Types b. Combustion Air c. Vents and Chimneys d. Equipment Sizing e. Heating Equipment f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance h. Hydronics and Hydronic Piping | 15 |
| 6. Safety a. Responsibility for Providing Personal Protective Equipment to Employees b. Safety Training Requirements c. Adequate Ventilation for Employees d. First Aid Kit Requirements e. Use of Personal Protective Equipment f. Material Safety Data Sheets (MSDS) g. Requirements for Work Around Toxic Materials h. Fall Protection i. Lockout/Tagout Procedures j. Ladders k. Scaffolds | 3 |

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- *Modern Refrigeration and Air Conditioning*, Althouse, Turnquist, Bracciano, 19th or 20th edition, Goodheart-Willcox, www.g-w.com
OR
Refrigeration & Air Conditioning Technology, Fifth Edition, 2005 Delmar Publishing/Thomson Learning, PO Box 6904, Florence, KY 41022, (800) 347-7707, www.delmarlearning.com
- *Manual J - Residential Load Calcs*, reprinted 2006, Eighth Full Edition, Air Conditioning Contractors of America (ACCA), 2800 Shirlington Road, Suite 300, Arlington, VA 22206, (703) 575-4477, www.acca.org
- *Mathematics for Plumbers and Pipefitters*, Lee Smith, 8th Edition, 2013, www.cengage.com
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- *NCCER Heating, Ventilating, and Air Conditioning Book 1, Book 2, Book 3. and Book 4.*

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HVACR JOURNEYMAN LIMITED

SCOPE OF WORK

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration or extension of air conditioning, refrigeration, heating, and ventilation, including ductwork, within a complete system limited to twenty-five tons cooling and five-hundred thousand BTU heating, and related appurtenances, apparatus, piping vessels, ducts and insulation while employed or supervised by a refrigeration contractor.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 60 | 70 | 42 | 180 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Electrical Knowledge and Controls a. General Electrical Theory and Knowledge b. Motors c. D/C Circuits d. A/C Circuits e. Controls | 15 |
| 2. Natural Gas a. Piping Valves b. Connectors c. Accessories d. Hangers and Supports e. Sizing f. Materials g. Testing h. Installation and Assembly | 9 |

| | | |
|----|---|----|
| 3. | Air Distribution Systems a. Duct Definitions b. Sizing and Design c. Duct Assembly and Installation d. Hangers and Supports e. Duct Materials and Shapes f. Duct Insulation g. Fire and Smoke Control h. Hoods and Exhaust Systems i. Testing and Balancing j. Ventilation Requirements k. Plans and Symbols | 10 |
| 4. | Refrigeration and Air Conditioning Systems a. Theory b. Refrigerants c. Equipment Sizing and Design d. Equipment and Components e. Piping f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance | 13 |
| 5. | Heating Systems a. Heating Theory and Types b. Combustion Air c. Vents and Chimneys d. Equipment Sizing e. Heating Equipment f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance h. Hydronics and Hydronic Piping | 10 |
| 6. | Safety a. Responsibility for Providing Personal Protective Equipment to Employees b. Safety Training Requirements c. Adequate Ventilation for Employees d. First Aid Kit Requirements e. Use of Personal Protective Equipment f. Material Safety Data Sheets (MSDS) g. Requirements for Work Around Toxic Materials h. Fall Protection i. Lockout/Tagout Procedures j. Ladders k. Scaffolds | 3 |

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www.iccsafe.org, with Oklahoma Revisions [http://ok.gov/oubcc/Codes & Rules/Adopted Building Codes/](http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/) The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed

- *International Fuel Gas Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions [http://ok.gov/oubcc/Codes & Rules/Adopted Building Codes/](http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/) The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed
- *Modern Refrigeration and Air Conditioning*, Althouse, Turnquist, Bracciano, 19th or 20th edition, Goodheart-Willcox, www.g-w.com

OR

Refrigeration & Air Conditioning Technology, Fifth Edition, 2005 Delmar Publishing/Thomson Learning, PO Box 6904, Florence, KY 41022, (800) 347-7707, www.delmarlearning.com

- *Mathematics for Plumbers and Pipefitters*, Lee Smith, 8th Edition, 2013, www.cengage.com
- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, *Candidates can access the Government website with this link* <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

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HVACR CONTRACTOR UNLIMITED

SCOPE OF WORK

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration or extension of air conditioning, refrigeration, heating, and ventilating, including ductwork within a complete system unlimited in horsepower or tons, and related appurtenances, piping vessels, ducts and insulation.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 90 | 70 | 63 | 240 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. Electrical Knowledge and Controls a. General Electrical Theory and Knowledge b. Motors c. D/C Circuits d. A/C Circuits e. Controls | 15 |
| 2. Natural Gas a. Piping Valves b. Connectors c. Accessories d. Hangers and Supports e. Sizing f. Materials g. Testing | 12 |
| 3. Air Distribution Systems a. Duct Definitions b. Sizing and Design c. Duct Assembly and Installation d. Hangers and Supports e. Duct Materials and Shapes f. Duct Insulation g. Fire and Smoke Control h. Hoods and Exhaust Systems i. Testing and Balancing j. Ventilation Requirements k. Plans and Symbols | 25 |
| 4. Refrigeration and Air Conditioning Systems a. Theory b. Refrigerants c. Equipment Sizing and Design d. Equipment and Components e. Piping f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance | 20 |
| 5. Heating Systems a. Heating Theory and Types b. Combustion Air c. Vents and Chimneys d. Equipment Sizing e. Heating Equipment f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance h. Hydronics and Hydronic Piping | 15 |

| | | | |
|----|---------------|---|---|
| 6. | Safety | | 3 |
| | a. | Responsibility for Providing Personal Protective Equipment to Employees | |
| | b. | Safety Training Requirements | |
| | c. | Adequate Ventilation for Employees | |
| | d. | First Aid Kit Requirements | |
| | e. | Use of Personal Protective Equipment | |
| | f. | Material Safety Data Sheets (MSDS) | |
| | g. | Requirements for Work Around Toxic Materials | |
| | h. | Fall Protection | |
| | i. | Lockout/Tagout Procedures | |
| | j. | Ladders | |
| | k. | Scaffolds | |

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HVACR JOURNEYMAN UNLIMITED

SCOPE OF WORK

Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration or extension of air conditioning, refrigeration, heating, and ventilating, including ductwork within a complete system unlimited in horsepower or tons, and related appurtenances, piping vessels, ducts and insulation while employed by a HVACR contractor.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 70 | 70 | 49 | 180 minutes |

| Topic Information | | # of Items |
|-------------------|--|------------|
| 1. | Electrical Knowledge and Controls | 15 |
| | a. General Electrical Theory and Knowledge | |
| | b. Motors | |
| | c. D/C Circuits | |
| | d. A/C Circuits | |



| | | |
|----|---|----|
| | e. Controls | |
| 2. | Natural Gas a. Piping Valves b. Connectors c. Accessories d. Hangers and Supports e. Sizing f. Materials g. Testing h. Installation and Assembly | 10 |
| 3. | Air Distribution Systems a. Duct Definitions b. Sizing and Design c. Duct Assembly and Installation d. Hangers and Supports e. Duct Materials and Shapes f. Duct Insulation g. Fire and Smoke Control h. Hoods and Exhaust Systems i. Testing and Balancing j. Ventilation Requirements k. Plans and Symbols | 16 |
| 4. | Refrigeration and Air Conditioning Systems a. Theory b. Refrigerants c. Equipment Sizing and Design d. Equipment and Components e. Piping f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance | 16 |
| 5. | Heating Systems a. Heating Theory and Types b. Combustion Air c. Vents and Chimneys d. Equipment Sizing e. Heating Equipment f. Equipment Installation g. System Operation, Troubleshooting, and Maintenance h. Hydronics and Hydronic Piping | 10 |
| 6. | Safety a. Responsibility for Providing Personal Protective Equipment to Employees b. Safety Training Requirements c. Adequate Ventilation for Employees d. First Aid Kit Requirements e. Use of Personal Protective Equipment f. Material Safety Data Sheets (MSDS) g. Requirements for Work Around Toxic Materials h. Fall Protection i. Lockout/Tagout Procedures j. Ladders k. Scaffolds | 3 |

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This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *International Mechanical Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes & Rules/Adopted_Building_Codes/ The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed
- *International Fuel Gas Code*, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions http://ok.gov/oubcc/Codes & Rules/Adopted_Building_Codes/ The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed
- *Modern Refrigeration and Air Conditioning*, Althouse, Turnquist, Bracciano, 19th or 20th edition, Goodheart-Willcox, www.g-w.com
OR
Refrigeration & Air Conditioning Technology, Fifth Edition, 2005 Delmar Publishing/Thomson Learning, PO Box 6904, Florence, KY 41022, (800) 347-7707, www.delmarlearning.com
- *Mathematics for Plumbers and Pipefitters*, Lee Smith, 8th Edition, 2013, www.cengage.com
- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, *Candidates can access the Government website with this link* <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

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OR
Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psionlinestore.com>

Additional books that are neither used in the development of the exam nor contain answers to all the related subject questions, but are allowed in the test area under the same physical conditions as the other books:

- *NCCER Heating, Ventilating, and Air Conditioning Book 1, Book 2, Book 3. and Book 4*

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REFRIGERATION CONTRACTOR

SCOPE OF WORK

Tests a candidate's knowledge of the operation, installation, maintenance, repair, fabrication, alteration or extension of refrigeration systems; including electrical components, piping, refrigerants, and refrigeration components.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 80 | 70 | 56 | 210 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Electrical Knowledge and Controls a. General Electrical Theory and Knowledge b. Motors c. A/C and D/C Circuits d. Meters e. Controls f. Relays | 20 |
| 2. Refrigerants a. Refrigerant Types b. Refrigerant Systems c. Refrigerant Theory | 10 |
| 3. Piping a. Piping Supports b. Piping Materials and Sizes c. Piping Pressure Tests | 5 |
| 4. Refrigeration Equipment and Components a. Valves b. Compressors c. Condensers d. Evaporators e. Receivers f. Accumulators g. Expansion Devices h. Dryers | 20 |
| 5. Refrigeration Systems Operations a. Systems Troubleshooting b. Systems Operations c. System Installation, Maintenance, and Repair | 20 |
| 6. Safety a. Safety Training Requirements b. Ventilation Requirements c. First Aid Kit Requirements d. Use of Personal Protective Equipment e. Material Safety Data Sheets (MSDS) f. Requirements for Work Around Toxic Materials g. Lockout/Tagout Procedures h. Ladders | 5 |

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- *Modern Refrigeration and Air Conditioning, Althouse, Turnquist, Bracciano, 19th or 20th edition, Goodheart-Willcox, www.g-w.com*
OR
Refrigeration & Air Conditioning Technology, Fifth Edition, 2005 Delmar Publishing/Thomson Learning, PO Box 6904, Florence, KY 41022, (800) 347-7707, www.delmarlearning.com
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REFRIGERATION JOURNEYMAN

SCOPE OF WORK

Tests a candidate's knowledge of the operation, installation, maintenance, repair, fabrication, alteration or extension of refrigeration systems; including electrical components, piping, refrigerants, and refrigeration components while employed by a Refrigeration Contractor.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 60 | 70 | 42 | 150 minutes |

| Topic Information | | # of Items |
|-------------------|---|------------|
| 1. | Electrical Knowledge and Controls a. General Electrical Theory and Knowledge b. Motors c. A/C and D/C Circuits d. Meters e. Controls f. Relays | 15 |
| 2. | Refrigerants a. Refrigerant Types b. Refrigerant Systems c. Refrigerant Theory | 5 |
| 3. | Piping a. Piping Supports b. Piping Materials and Sizes c. Piping Pressure Tests | 5 |
| 4. | Refrigeration Equipment and Components a. Valves b. Compressors c. Condensers d. Evaporators e. Receivers f. Accumulators g. Expansion Devices h. Dryers | 17 |
| 5. | Refrigeration Systems Operations a. Systems Troubleshooting b. Systems Operations c. System Installation, Maintenance, and Repair | 15 |
| 6. | Safety a. Safety Training Requirements b. Ventilation Requirements c. First Aid Kit Requirements d. Use of Personal Protective Equipment e. Material Safety Data Sheets (MSDS) f. Requirements for Work Around Toxic Materials g. Lockout/Tagout Procedures h. Ladders | 3 |

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LIMITED RESIDENTIAL JOURNEYMAN (MECHANICAL)

SCOPE OF WORK

A limited residential journeyman license entitles the licensee to install complete new systems for detached one or two family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress. Installations shall include 5-ton or less cooling systems and 150,000 Btu/h or less heating systems and related accessories such as humidifiers, filtering systems, kitchen vent hoods, exhaust fans and clothes dryer vent exhausts for such dwellings. Such installations shall not include any fuel gas piping, welding, soldering, brazing or final connection of refrigerant lines or final connection of any electrical wiring permitted to be installed in accordance with Oklahoma statutes.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 40 | 70 | 28 | 100 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Duct Systems (metallic and nonmetallic) | 9 |
| 2. Vents | 3 |
| 3. Insulation | 3 |
| 4. Clothes Dryer | 3 |
| 5. Range Hoods | 1 |
| 6. Clearances | 3 |
| 7. Access | 4 |
| 8. Appliance Installation | 1 |
| 9. Restroom Exhaust Systems | 1 |
| 10. Combustion Air | 3 |
| 11. Piping | 1 |
| 12. General Installation | 3 |
| 13. SMACNA Symbols | 3 |
| 14. Regulations | 2 |

REFERENCE LIST

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This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *International Residential Code for One-and Two-Family Dwellings*, 2015 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions found at http://ok.gov/oubcc/Codes_& Rules/Adopted_Building_Codes
- *Oklahoma Mechanical Industry Regulations*, Oklahoma Administrative Code, Title 158, Chapter 50, Oklahoma Construction Industries Board, 2401 NW 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *SMACNA Symbols Sheet*, located under testing information, www.ok.gov/cib

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LIMITED RESIDENTIAL INSTALLER

SCOPE OF WORK

A limited residential installer license entitles the licensee to install complete new systems in new construction for detached one or two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with a separate means of egress. Installations shall include 5-ton or less cooling systems and 150,000 Btu/h or less heating systems and related accessories such as humidifiers, filtering systems, kitchen vent hoods, exhaust fans and clothes dryer vent exhausts for such dwellings. Such installations **shall not** include any fuel gas piping, welding, soldering, brazing or final connection of refrigerant lines or final connection of any

electrical wiring permitted to be installed in accordance with Oklahoma statutes.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 30 | 70 | 21 | 75 |

| Topic Information | # of Items |
|-----------------------------|------------|
| 1. Duct Systems | 9 |
| 2. Vents | 2 |
| 3. Insulation | 2 |
| 4. Clothes Dryer | 2 |
| 5. Range Hoods | 1 |
| 6. Clearances | 2 |
| 7. Access | 3 |
| 8. Appliance Installation | 1 |
| 9. Restroom Exhaust Systems | 1 |
| 10. Combustion Air | 2 |
| 11. Piping | 1 |
| 12. General Installation | 2 |
| 13. SMACNA Symbols | 2 |

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5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions found at http://ok.gov/oubcc/Codes_& Rules/Adopted_Building_Codes

- SMACNA Symbols Sheet, located under testing information, www.ok.gov/cib

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PLUMBING BUSINESS AND LAW

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 50 | 75 | 37 | 120 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Bidding and Estimating a. General Estimating b. Bid | 10 |
| 2. Project Management and Supervision a. General Project Oversight b. Oversee Budget c. Oversee Quality Control d. Oversee Materials Control e. Manage Jobsite Safety f. Schedule g. Potentially Hazardous Materials h. Environmental Protection i. Submittals and Reports j. Ethics k. Liens | 7 |
| 3. Contracts a. Terminology b. Required Elements/Components c. Contract Types d. Change Orders e. Standardized Documents f. Interpretation g. Warranties h. Documents/Inclusions i. Other Obligations | 5 |
| 4. Financial a. Business Organization Characteristics, Advantages, and Disadvantages b. Business Start-up c. Accounting Method d. Cash Flow Terminology e. Accounts Receivable | 8 |



| | | |
|----|--|---|
| | <ul style="list-style-type: none"> f. Accounts Payable g. Balance Sheet h. Income Statement i. Taxes on Company Income j. Obtaining Financing k. Checking Account l. Financial Ratios | |
| 5. | Labor and Personnel <ul style="list-style-type: none"> a. ADA b. Labor Standards c. Requirements for Non-citizens and/or Non-residents d. Workers' Compensation e. Federal or State OSHA f. New Hires g. Personnel Record Keeping h. Other Requirements | 5 |
| 6. | Risk Management <ul style="list-style-type: none"> a. Insurance b. Bonds | 4 |
| 7. | Payroll and Payroll Taxes <ul style="list-style-type: none"> a. Taxes b. Forms and Due Dates | 5 |
| 8. | Licensing Requirements <ul style="list-style-type: none"> a. Required Insurance/Bonds b. Renewal | 6 |

2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib

- *NASCLA Contractors' Guide to Business, Law and Project Management*, Basic 13th Edition National Association of State Contractors Licensing Agencies (NASCLA), 23309 N. 17th Drive, Phoenix, Arizona 85027, Telephone: (623) 587-9519, www.nascla.org
- Oklahoma Workers' Compensation Act, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
OR
Oklahoma Workers' Compensation Act Statutory Excerpts, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib

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The following reference materials are allowed in the examination center:

- *State of Oklahoma, Construction Industries Board, Unofficial Administrative Rules & Courtesy Exam Study Aids Book*, current edition (available at the Construction Industries Board Office - no fee).
- *Oklahoma Plumbing License Law of 1955*, Oklahoma Statutes, Title 59, Chapter 27, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Plumbing Industry Regulations*, Oklahoma Administrative Code, Title 158, Chapter 30, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Fine Schedule of the Construction Industries Board*, Oklahoma Administrative Code, Title 158, Chapter 10, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *Oklahoma Lien Law*, Oklahoma Statutes, Title 42, Chapter 3, Oklahoma Construction Industries Board,

PLUMBING CONTRACTOR AND NATURAL GAS

SCOPE OF WORK

Installation, repair and maintenance or extension of any plumbing system, including sanitary drainage waste and vents, water supply, plumbing fixtures and roof drains and also install, maintain, or repair gas piping, appliances, vents, flues, tanks and other related appurtenances in a supervised environment.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 85 | 75 | 64 | 180 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. General Plumbing Knowledge and Regulations | 10 |
| <ul style="list-style-type: none"> a. Head Pressure b. Pipe Joints c. Solvent Welded Pipe Joints d. Calculations of Area and Volume e. Calculations of Water Supply Friction Loss f. Permits and Inspections g. Job Costs h. Notches and Bore Holes in Structural Members i. Fire Integrity j. Pipe Offsets Test Systems k. Condensate Disposal Trenching, Excavation, and | |



| | | |
|-----|--|----|
| | Backfill I. Fitting Identification | |
| 2. | Piping, Valves, and Control Valves a. PVC Piping and Connections b. CPVC Piping and Connections c. Galvanized Piping and Connections d. Copper Tubing and Connections e. Copper Piping and Connections f. Polyethylene Piping and Connections g. PEX Piping and Connections h. Underground Piping and Connections i. Cast Iron Piping and Connections j. Steel Piping and Connections k. Connecting Dissimilar Materials l. Valves and Control Valves | 8 |
| 3. | Fixtures and Equipment a. Identify Minimum Plumbing Needs for Structures/Facilities b. Install Fixtures and Associated Equipment | 8 |
| 4. | Water Supply a. Water Supply and Distribution Lines b. Protection of Potable Water Supply c. Backflow | 10 |
| 5. | Drains and Sewers a. Drain and Sewer Pipe b. Building Sewers c. Sewer and Drain Cleanouts d. Sewage Ejectors and Sump Pumps e. Health Care Plumbing f. Drain and Waste Piping g. Storm Drainage | 10 |
| 6. | Vents a. Vent Installation b. Developed Length | 13 |
| 7. | Traps, Interceptors, Indirect, and Special Waste a. Traps b. Interceptors and Separators c. Indirect and Special Waste | 5 |
| 8. | Isometric Analysis a. Isometric Drawings | 7 |
| 9. | Fuel Gas a. Gas Distribution Pipe Sizing b. Gas Pressure Regulators c. Hangers and Supports d. Direction Changes e. Concealed Locations f. Joints and Connections g. Valves h. Location of Outlets i. Drip Leg and Sediment Traps j. Water Heaters and Other Appliances k. Confined Spaces l. Combustion Air m. Chimneys and Vents n. Permits and Inspections for Gas o. Cost Estimates for Gas p. Outdoor Gas Supply Piping q. Testing and Inspection of Gas Systems r. Pipe Material Requirements | 10 |
| 10. | Safety a. Responsibility for Providing Personal Protective Equipment b. Excavation Safety | 4 |

| | |
|--|--|
| | c. Employee Protection in Trenches and Excavations d. Safety Training Requirements e. Adequate Ventilation for Employees f. First Aid Kit Requirements g. Use of Personal Protective Equipment h. Signs, Signals, and Barricades As Required i. Tools and Equipment Requirements j. Ladder Use in Accordance with Requirements k. Workplace Illumination l. Scaffold Use in Accordance with Requirements m. Requirements for Work Around Toxic Materials n. Appropriate Material Cleanup and Disposal o. Material Safety Data Sheets (MSDS) p. Handling and Storing Materials q. Fall Protection |
|--|--|

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PLUMBING JOURNEYMAN AND NATURAL GAS

SCOPE OF WORK

Installation, repair and maintenance or extension of any plumbing system, including sanitary drainage waste and vents, water supply, plumbing fixtures and roof drains and also install, maintain, or repair gas piping, appliances, vents, flues, tanks and other related appurtenances in a supervised environment.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 85 | 75 | 64 | 180 minutes |

| Topic Information | # of Items |
|---|------------|
| 1. General Plumbing Knowledge and Regulations a. Head Pressure b. Pipe Joints c. Solvent Welded Pipe Joints d. Calculations of Area and Volume e. Calculations of Water Supply Friction Loss f. Permits and Inspections g. Job Costs h. Notches and Bore Holes in Structural Members i. Fire Integrity j. Pipe Offsets Test Systems k. Condensate Disposal Trenching, Excavation, and Backfill l. Fitting Identification | 10 |
| 2. Piping, Valves, and Control Valves a. PVC Piping and Connections b. CPVC Piping and Connections c. Galvanized Piping and Connections d. Copper Tubing and Connections e. Copper Piping and Connections f. Polyethylene Piping Connections g. PEX Piping and Connections h. Underground Piping and Connections i. Cast Iron Piping and Connections j. Steel Piping and Connections k. Connecting Dissimilar Materials l. Valves and Control Valves | 8 |
| 3. Fixtures and Equipment a. Identify Minimum Plumbing Needs | 8 |

| | | |
|-----|--|----|
| | for Structures/Facilities b. Install Fixtures and Associated Equipment | |
| 4. | Water Supply a. Water Supply and Distribution Lines b. Protection of Potable Water Supply c. Backflow | 10 |
| 5. | Drains and Sewers a. Drain and Sewer Pipe b. Building Sewers c. Sewer and Drain Cleanouts d. Sewage Ejectors and Sump Pumps e. Health Care Plumbing f. Drain and Waste Piping g. Storm Drainage | 10 |
| 6. | Vents a. Vent Installation a. Developed Length | 13 |
| 7. | Traps, Interceptors, Indirect, and Special Waste a. Traps a. Interceptors and Separators b. Indirect and Special Waste | 5 |
| 8. | Isometric Analysis a. Isometric Drawings | 7 |
| 9. | Fuel Gas a. Gas Distribution Pipe Sizing b. Gas Pressure Regulators c. Hangers and Supports d. Direction Changes e. Concealed Locations f. Joints and Connections g. Valves h. Location of Outlets i. Drip Leg and Sediment Traps j. Water Heaters and Other Appliances k. Confined Spaces l. Combustion Air m. Chimneys and Vents n. Permits and Inspections for Gas o. Cost Estimates for Gas p. Outdoor Gas Supply Piping q. Testing and Inspection of Gas Systems r. Pipe Material Requirements | 10 |
| 10. | Safety a. Responsibility for Providing Personal Protective Equipment b. Excavation Safety c. Employee Protection in Trenches and Excavations d. Safety Training Requirements e. Adequate Ventilation for Employees f. First Aid Kit Requirements g. Use of Personal Protective Equipment h. Signs, Signals, and Barricades As Required i. Tools and Equipment Requirements j. Ladder Use in Accordance with Requirements k. Workplace Illumination l. Scaffold Use in Accordance with Requirements m. Requirements for Work Around Toxic Materials n. Appropriate Material Cleanup and Disposal o. Material Safety Data Sheets (MSDS) p. Handling and Storing Materials q. Fall Protection | 4 |

REFERENCE LIST

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Candidates may use a silent, non-printing, non-programmable calculator in the examination center. Candidates will also be provided with a magnifying glass upon request.

This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *International Plumbing Code, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions [http://ok.gov/oubcc/Codes & Rules/Adopted Building Codes/](http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/) The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed*
- *International Fuel Gas Code, 2015 or 2018 edition, International Code Council, 5203 Leesburg Pike, Suite 600, Falls Church, VA 22041, (800) 786-4452, www.iccsafe.org, with Oklahoma Revisions [http://ok.gov/oubcc/Codes & Rules/Adopted Building Codes/](http://ok.gov/oubcc/Codes_&_Rules/Adopted_Building_Codes/) The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed**Mathematics for Plumbers and Pipefitters, Lee Smith, 8th Edition, 2013, www.cengage.com*
- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA), with latest available amendments, **Candidates can access the Government website with this link** <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>*

Hard copy can be purchased from Mancomm.com. <https://mancomm.com/29-cfr-1926-osha-construction-industry-regulations-standards/>. Amazon and other retailers sell the Mancomm OSHA publications.
OR
Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psionlinestore.com>

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ROOFING BUSINESS AND LAW

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 50 | 70 | 35 | 120 minutes |

| Topic Information | # of Items |
|--|------------|
| 1. Bidding and Estimating a. General Estimating b. Bid | 10 |
| 2. Project Management and Supervision a. General Project Oversight b. Oversee Budget c. Oversee Quality Control d. Oversee Materials Control e. Manage Jobsite Safety f. Schedule g. Potentially Hazardous Materials h. Environmental Protection i. Submittals and Reports j. Ethics k. Liens | 7 |
| 3. Contracts a. Terminology b. Required Elements/Components c. Contract Types d. Change Orders e. Standardized Documents f. Interpretation g. Warranties h. Documents/Inclusions i. Other Obligations | 5 |
| 4. Financial a. Business Organization Characteristics, Advantages, and Disadvantages b. Business Start-up c. Accounting Method d. Cash Flow Terminology e. Accounts Receivable f. Accounts Payable g. Balance Sheet h. Income Statement i. Taxes on Company Income j. Obtaining Financing k. Checking Account l. Financial Ratios | 8 |
| 5. Labor and Personnel a. ADA b. Labor Standards c. Requirements for Non-citizens and/or Non-residents d. Workers' Compensation e. Federal or State OSHA f. New Hires g. Personnel Record Keeping h. Other Requirements | 5 |
| 6. Risk Management a. Insurance b. Bonds | 4 |



| | | |
|----|--|---|
| 7. | Payroll and Payroll Taxes a. Taxes b. Forms and Due Dates | 5 |
| 8. | Licensing Requirements a. Required Insurance/Bonds b. Renewal | 6 |

(NASCLA), 23309 N. 17th Drive, Phoenix, Arizona
85027, Telephone: (623) 587-9519, www.nascla.org

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Candidates may use a silent, non-printing, non-programmable calculator in the examination center. Candidates will also be provided with a magnifying glass upon request.

This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- State of Oklahoma, Construction Industries Board, Unofficial Administrative Rules & Courtesy Exam Study Aids Book, current edition (available at the Construction Industries Board Office - no fee).
- Oklahoma Roofing Contractor Registration Act, Oklahoma Statutes, Title 59, Section 1151, *et seq.*, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- Oklahoma Roofing Contractor Regulations, Oklahoma Administrative Code, Title 158, Chapter 85, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- Oklahoma Fine Schedule of the Construction Industries Board, Oklahoma Administrative Code, Title 158, Chapter 10, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- Oklahoma Workers' Compensation Act, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
OR
Oklahoma Workers' Compensation Act Statutory Excerpts, Oklahoma Statutes, Title 85A, Chapter 1, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- Oklahoma Lien Law, Oklahoma Statutes, Title 42, Chapter 3, Oklahoma Construction Industries Board, 2401 N.W. 23rd Street, Suite 2F, Oklahoma City, OK 73107, www.ok.gov/cib
- *NASCLA Contractors' Guide to Business, Law and Project Management*, Basic 13th Edition National Association of State Contractors Licensing Agencies

ROOFING CONTRACTOR COMMERCIAL ENDORSEMENT

SCOPE OF WORK

A commercial roofing contractor's work includes, but is not limited to, installation, renovation, remodeling, reroofing, reconstructing, repair, maintenance, improvement, alteration, and waterproofing of building roofs using a variety of materials, including shingles, asphalt, and metal. Commercial roofing contractors supervise and manage activities or personnel, supply material, and solicit commercial roofing contracts. A commercial roofing contractor may operate as an individual, firm, partnership, or corporation installing or repairing roofs on residential, commercial and industrial buildings.

| # of Questions | Passing % | Passing (Raw) | Time Allowed |
|----------------|-----------|---------------|--------------|
| 50 | 70 | 35 | 150 minutes |

| Topic Information | | # of Items |
|-------------------|--|------------|
| 1. | General Roofing Knowledge | 5 |
| 2. | Low Slope Roofing | 15 |
| 3. | Architectural Metal Roofing Systems and Sheet Metal Flashing | 9 |
| 4. | Moisture and Energy Control | 6 |
| 5. | Repairs and Reroofing | 8 |
| 6. | Safety | 7 |

REFERENCE LIST

The reference materials listed below were used to prepare the questions for this examination. The examination may also contain questions based on trade knowledge or general industry



practices. Except for Code books, later editions of references are allowed in the test area. For Code questions, the examinations will be based only on the edition of the Code book that is listed.

Candidates may use a silent, non-printing, non-programmable calculator in the examination center. Candidates will also be provided with a magnifying glass upon request.

This examination is OPEN BOOK.

The following reference materials are allowed in the examination center:

- *Architectural Sheet Metal Manual*, 2012, Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA), www.smacna.org/store
- *International Building Code*, 2015 or 2018, International Code Council, (800) 786-4452, www.iccsafe.org with Oklahoma Revisions [http://ok.gov/oubcc/Codes & Rules/Adopted Building Codes/](http://ok.gov/oubcc/Codes%20&%20Rules/Adopted%20Building%20Codes/) *The 2018 Code can be used starting 9/14/2021. Starting 12/15/2021 the 2015 code will no longer be allowed.*
- *NRCA Roofing Manual: Membrane Roofing Systems*, 2019, The National Roofing Contractors Association, (866) 275-6722, www.nrca.net
- *NRCA Roofing Manual: Metal Panel and SPF Roof Systems*, 2020, The National Roofing Contractors Association, (847) 299-9070, www.nrca.net
- *NRCA Roofing Manual: Steep Slope Roof Systems*, 2017 or 2021, The National Roofing Contractors Association, (847) 299-9070, www.nrca.net *As of 8/24/2021 the 2021 version can be used. Starting 11/15/2021 the 2017 version will no longer be allowed.*
- *NRCA Roofing Manual: Architectural Metal Flashing Condensation and Air Leakage Control, and Reroofing*, 2018, The National Roofing Contractors Association, (847) 299-9070, www.nrca.net
- *Code of Federal Regulations - 29 CFR Part 1926 (OSHA)*, with latest available amendments, *Candidates can access the Government website with this link* <https://www.osha.gov/laws-regs/regulations/standardnumber/1926>

Hard copy can be purchased from Mancomm.com. <https://mancomm.com/29-cfr-1926-osha-construction-industry-regulations-standards/>. Amazon and other retailers sell the Mancomm OSHA publications.

OR

Code of Federal Regulations - 29 CFR Part 1926 Selections by PSI, with latest available amendments, 866-589-3088, <http://www.psionlinestore.com>

the exam will begin. If you download a reference from the Internet, it must be spiral bound or hole-punched and placed in a binder or stapled in the left-hand corner.

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| PLUMBING | | |
|--|------------------|-----------|
| Plumbing Business and Law Only | \$100 | |
| Residential Journeyman Plumbing and National Gas | \$100 | |
| Plumbing Journeyman and Natural Gas | \$100 | |
| Combination: Plumbing Contractor and Natural Gas & Business and Law | \$100 | |
| **** Plumbing Contractor and Natural Gas | \$100 | |
| ROOFING | | |
| Roofing Business and Law Only | \$100 | |
| ****Roofing Contractor Commercial Endorsement | \$100 | |
| Combination: Roofing Contractor Commercial Endorsement & Business and Law | \$100 | |
| | Total Fee | \$ |

Total Fee Included for Examination: \$_____. You may pay by credit card, company check, cashier's check or money order. Make check or money order payable to PSI and note your ID# on it.

If paying by credit card, check one: VISA MasterCard American Express Discover

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Asterisk Explanation

Note: To obtain an **Unlimited Electrical Contractor** license, you must pass the Unlimited Electrical Contractor exam and the Electrical Business and Law exam. The Unlimited Electrical Contractor exam and the Electrical Business and Law exam can be taken as a combination—only one \$100 fee is required when both exams are taken during the same session.

**** Note:** To obtain a **Residential Electrical Contractor** license, you must pass both the Residential Electrical Contractor exam and the Electrical Business and Law Exam. The Residential Electrical Contractor exam and the Electrical Business and Law exam can be taken as a combination—only one \$100 fee is required when both exams are taken during the same session.

***** Note:** To obtain this license, you must pass both the specific contractor exam and the Mechanical Business and Law exam. The specific contractor exam and the Mechanical Business and Law exam can be taken as a combination—only one \$100 fee is required when both exams are taken during the same session.

****** Note:** To obtain the **Plumbing Contractor and Natural Gas** license, you must pass both the contractor exam and the Plumbing Business and Law exam. The Plumbing Contractor and Natural Gas exam and the Plumbing Business and Law exam can be taken as a combination—only one \$100 fee is required when both exams are taken during the same session.

****** Note:** To obtain the **Roofing Contractor Commercial Endorsement** license, you must pass both the contractor exam and the Roofing Business and Law exam. The Roofing Contractor Commercial Endorsement exam and the Roofing Business and Law exam can be taken as a combination—only one \$100 fee is required when both exams are taken during the same session.



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EXAM ACCOMMODATION REQUEST FORM INSTRUCTIONS

All examination centers are equipped to provide access in accordance with the Americans with Disabilities Act (ADA) of 1990. Applicants with disabilities or those who would otherwise have difficulty taking the examination should request for alternative arrangements by [Clicking Here](#).

Requirements for exam accommodation requests:

You are required to submit documentation from the medical authority or learning institution that rendered a diagnosis. Verification must be uploaded to PSI on the letterhead stationery of the authority or specialist and include the following:

- Description of the disability and limitations related to testing
- Recommended accommodation/modification
- Name, title and telephone number of the medical authority or specialist
- Original signature of the medical authority or specialist

**MAKE SURE YOU ARE ELIGIBLE FOR THE EXAMINATION BEFORE
REQUESTING EXAMINATION ACCOMMODATIONS**

PSI licensure:certification
3210 E Tropicana
Las Vegas, NV 89121