Chicago Plumber
Licensure Examination Information

This candidate guide should help you prepare for the Chicago plumber licensure examination. Part I contains general information about testing procedures. Part II outlines the content of the examination and recommends study materials. Part III includes sample questions to help you prepare for the test.

Part I     General Information

PURPOSE OF THE EXAMINATIONS
This examination is required for professional licensure of plumbers in the City of Chicago. You must pass this test to be licensed.

TEST VALIDITY & TEST LENGTH The test is timed to be three hours in length. All test questions have been subjected to strict psychometric controls and reflect standards and practices validated by plumbers who are licensed in the City of Chicago.

STUDY MATERIALS Study materials for this examination are described in Part II of this candidate guide. These sources may be purchased directly from the publishers, from Internet bookstores such as Amazon.com or Barnes and Noble (bn.com).

REFERENCES & CALCULATORS References that may be required to answer questions on the test will be provided with the examination. No calculators or printed materials other than those provided at the test site may be used during the test.

MISSING AN EXAMINATION There are no "make-up" examinations. You may re-register for the next examination date. THERE ARE NO REFUNDS.

SUCCESS/LICENSURE Candidates who score 70 or higher will receive a PASS notice and an application for licensure.

FAILURE Candidates who score below 70 will receive a FAILURE notice and an application for re-examination. Candidates are encouraged to retake the examination; many candidates who initially fail such an exam pass on subsequent attempts.

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Part II  Test Content and Recommended Study Materials

Plumbers must demonstrate that they are familiar with safe practices and procedures in their profession. Content areas and their relative importance in this test are outlined below. Relevant sections of the 2003 Chicago Plumbing Code are noted. Current editions of the Chicago Building Code also provide this information.

I. Plumbing Theory, Practices & Job safety  20% of Examination
   Public health, Plumbing Math & Principles, Planning, Safety & OSHA Requirements, Tools & Equipment, Basic Electricity

II. Code Requirements for Plumbers & Contractors  2% of Examination
    Chapter 4-332

III. Plumbing Systems  44% of Examination
    Chapter 18-29
    Article I Administration
    Article II Definitions
    Article III General Regulations
    Article IV Fixtures, Faucets & Fixture Fittings
    Article V Water Heaters
    Article VI Water Supply & Distribution
    Article VII Sanitary Drainage
    Article VIII Indirect/Special Waste
    Article IX Vents
    Article X Traps, Separators and Interceptors
    Article XI Storm Drainage
    Article XII Swimming Pools

IV. Rehabilitation Requirements  5% of Examination
    Chapter 13-200
    420 Provisions for Buildings being Remodeled
    460 Plumbing Requirements

V. Drawings, Charts & Plans  8% of Examination
   Reading Blueprints, Locating Fixtures, Completing Building Plans to Code

VI. Cutting & Assembling Plumbing System Components  12% of Examination
    Water Flow & Connection Requirements
    Materials, Sizing & Drainage Requirements
    Using Copper, Steel, Cast Iron, Plastic & Acid-Resistant Materials

VII. Troubleshooting, Maintenance & Repairs  10% of Examination
Recommended Study Materials

All questions in this examination are based on information provided in the following sources. Therefore, all candidates should become as familiar as possible with each of these references in preparation for this examination. Some information from these references that may be required to answer questions on the test will be provided with the examination. **However, no calculators or printed materials other than those provided at the test site may be used during the test.**

Most publishers will accept telephone orders to be charged to a VISA, Mastercard or American Express account. These references also may be available from Internet bookstores such as Amazon.com or Barnes and Noble (bn.com).

1. **2006 Chicago Plumbing Code**  
   (Also available in current edition of *Chicago Building Code*; see content outline to identify relevant sections)  
   Publisher: Index Publishing Company  
   Phone: (312) 644-7800  
   415 North State Street, Chicago, IL 60610  
   Website: [http://www.lawbulletin.com](http://www.lawbulletin.com)

   Publisher: Goodheart-Willcox Company, Inc.  
   Phone: (708) 687-5000  
   18604 West Creek Drive, Tinley Park, IL 60477-6243  
   Website: [http://www.goodheartwillcox.com](http://www.goodheartwillcox.com)

   Publisher: American Technical Publishers  
   Phone: (708) 957-1100  
   1155 West 175th Street, Homewood, IL 60430  
   Website: [http://www.americantech.org](http://www.americantech.org)

   Publisher: Delmar Publishing Company  
   Phone: (800) 347-7707  
   Website: [http://www.delmar.com](http://www.delmar.com)

   Publisher: Delmar Publishing Company  
   Phone: (800) 347-7707  
   Website: [http://www.delmar.com](http://www.delmar.com)

   Publisher: Macmillan Publishing Company  
   Phone: (800) 755-7672  
   273 Polly Drummond Road, Newark, DE 19711
Part III Sample Test

All questions on these examinations are multiple choice with one correct answer and three incorrect choices. For this sample test only, correct answers and references are provided at the end of this section to help you prepare for is examination.

1. Which term refers to the point at which material removed from a trench will stay without sliding back into the trench?
   A. Excavation
   B. Trench shield
   C. Angle of repose
   D. Trench shoring

2. How many gallons of water are required to fill 2500 feet of a 6-inch water main?
   A. 306
   B. 2447
   C. 2255
   D. 3670

3. Which of these is appropriate for use on fires involving flammable liquids such as gasoline, grease and oil?
   A. Class A fire extinguishers marked with a green triangle
   B. Class B fire extinguishers marked with a red square
   C. Class C fire extinguishers marked with a blue circle
   D. Class D fire extinguishers marked with a yellow star

4. What does the Chicago Plumbing Code specify prior to a service pipe inspection?
   A. The entire service pipe must be left accessible until after the inspection.
   B. The service pipe must be left exposed only within five feet of each end.
   C. The service pipe trench should be filled with sand and compacted with water.
   D. The service pipe must be supported by compacted sand prior to the inspection.
5. What does the *Chicago Plumbing Code* specify for underground piping with solder joints?
   
   A. Silver brazing alloys  
   B. 95/5 tin-antimony solder  
   C. Any solder with less than 8% lead content  
   D. Any solder with lead content equal to or less than 0.2%

6. Which of these does the *Chicago Plumbing Code* define as a minor repair?
   
   A. Replacing a broken house drain  
   B. Removing obstructions from soil and sewer pipes  
   C. Reinstallation of fixtures during a remodeling project  
   D. Installation of new fixtures during a remodeling project

7. What does the *Chicago Plumbing Code* specify as the depth of a sump or receiving tank?
   
   A. A minimum of 30 inches  
   B. A maximum of 30 inches  
   C. A minimum of 36 inches  
   D. A maximum of 42 inches

8. What does the *Chicago Plumbing Code* specify as the maximum horizontal length between a trap and its vent?
   
   A. 18"  
   B. 24"  
   C. 30"  
   D. 60"

9. What do *Chicago Plumbing Code* specifications require for the grease retention capacity of a grease interceptor or a grease trap?
   
   A. Capacity in pounds of grease retained must be twice the flow rate in gpm for the sink or receptor served.  
   B. Capacity in pounds of grease retained must equal the flow rate in gpm from the sink or receptor served.  
   C. At least 75% of the grease received must be retained.  
   D. At least 98% of the grease received must be retained.
10. What does the Chicago Plumbing Code specify for handicapped accessibility when doors are being replaced in a remodeled residential building that must meet the Rehabilitation Code?

A. Any door that is replaced must be at least 32" wide.
B. Any door that is replaced must be at least 30" wide.
C. Doors to toilet rooms must be at least 32" wide.
D. Doors to toilet rooms must be at least 30" wide.

11. Who determines what information is in rough-in sheets?

A. The architect
B. The building contractor
C. The plumbing contractor
D. The fixture manufacturer

12. Which of these is the architectural symbol for a soldered sanitary T?

A.  
B.  
C.  
D.  

13. What is the total pitch on a 75' long drain line that is installed at a grade of \( \frac{3}{4} \)" per 10'?

A. 4 \( \frac{7}{8} \)"
B. 5 \( \frac{5}{8} \)"
C. 6 \( \frac{3}{8} \)"
D. 7 \( \frac{1}{2} \)"

14. What is the pressure on test plug at the base of a 32' high stack when it is filled with water?

A. 10.42 psi
B. 13.89 psi
C. 18.23 psi
D. 62.50 psi
15. Which of these accurately describes the drinking fountain in the above diagram?

A. It is individually vented.
B. It is crown vented.
C. It is stack vented.
D. It is not vented.

16. What should happen after a combination thermostat and EOC opens in an electric water heater?

A. The thermostat should reset itself automatically.
B. The heating elements must be recalibrated.
C. The combined unit must be reset manually.
D. The EOC must be replaced immediately.

17. Which of these is LEAST likely to cause a submersible pump to deliver little or no water while it operates?

A. Worn pump parts
B. A loose motor shaft
C. Defective motor wiring or cable
D. A pump intake screen blocked by mud or sand
18. What is the end to end length of pipe W if \( H_1 \) measures 4'-7 \( \frac{1}{2} \)", \( H_2 \) is 3'-4", the vertical measure is 5'-11 \( \frac{1}{2} \)", and each offset is 10" for an assembly using 2" threaded pipe?

A. 4'-7 \( \frac{1}{2} \)"
B. 4'-6 \( \frac{1}{2} \)"
C. 4'-8 \( \frac{3}{4} \)"
D. 4'-9 \( \frac{3}{4} \)"

Correct Answers and References

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<th>Correct Answer</th>
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<td>C</td>
<td>Blankenbaker page 37, Ripka (1994) page 19</td>
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<td>2</td>
<td>D</td>
<td>Blankenbaker pages 48-49, Smith pages 9, 168, 172</td>
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<td>( 2500' = 30,000&quot; );</td>
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<td>( \text{Vol} = (30,000&quot; \times 3^2 \times \pi)/231 \text{ cu in/gal}=3670 \text{ gallons} )</td>
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<td>3</td>
<td>B</td>
<td>Blankenbaker pages 34-35</td>
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<tr>
<td>4</td>
<td>A</td>
<td>2002 Chicago Building Code 18-29-601.2 &amp; 601.3</td>
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<td>6</td>
<td>B</td>
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<td>10</td>
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<td>2002 Chicago Building Code 13-200-420</td>
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<td>11</td>
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<td>Ripka (1994) pages 264-80, Guest pages 137-151</td>
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<td>12</td>
<td>B</td>
<td>Blankenbaker pages 108-109</td>
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<td>13</td>
<td>B</td>
<td>Smith pages 118-120; ( .75&quot; \times 75/10' = .75&quot; \times 7.5 = 5.625&quot; = 5 \frac{5}{8}&quot; )</td>
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<tr>
<td>14</td>
<td>B</td>
<td>Smith page 178; 32 \times 0.434 \text{ psi} = 13.89 \text{ psi}</td>
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<td>15</td>
<td>A</td>
<td>Blankenbaker pages 123-127; Ripka (1994) pages 138-142</td>
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<tr>
<td>16</td>
<td>C</td>
<td>McConnell page 18</td>
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<tr>
<td>17</td>
<td>C</td>
<td>McConnell pages 147-150</td>
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| 18       | D             | Smith pages 79-85, 218, 223, 234; W: c-c = 71\( \frac{1}{2} \)" - 10" = 61 \( \frac{1}{2} \)"  
|          |               | e-e = 61\( \frac{1}{2} \)" - [(1\( \frac{1}{16} \) + 3\( \frac{1}{16} \)) - 2 (\( \frac{1}{2} \))] = 61\( \frac{1}{2} \)" - 3\( \frac{3}{4} \)" = 57\( \frac{3}{4} \)" = 4' 9\( \frac{3}{4} \)" |