

# **Master Plumber Examination Information**

1. Any person who desires to engage in the business of plumbing in Onondaga County as a Master Plumber must be examined and obtain a Certificate of Competency from the Onondaga County Examining Board for Plumbers.

Eligibility to take the Competency Examination is outlined in the Requirements for Implementation of the New York State Fire Prevention and Building Code - Plumbing.

**For an application to request entrance into the examination**, write or phone:

Onondaga County Department of Water Environment Protection  
Division of Plumbing Control  
650 Hiawatha Blvd W  
Syracuse, NY 13204-1123  
Telephone: (315) 435-6614  
Fax: (315) 435-5425

The Onondaga County Department of Personnel will administer and proctor the exam.

2. The next examination date is:

**Saturday, November 2, 2024**

**Part II - 8:00 a.m. to 1:00 p.m.**

**And**

**Part I – 1:30 p.m. to 3:30 p.m.**

**Applications and payments must be in to Plumbing Control by the End of Business on:**

**Friday, September 27, 2024**

**Please Note – LATE APPLICATIONS WILL NOT BE ACCEPTED FOR ANY REASON. Applications received without payment will not be accepted**

3. You will be notified in writing as to whether or not you are found to be qualified to take the exam. You will receive this notification no later than 10 days prior to the examination date. If you are found to be qualified, you will be notified of the time and location of the exam.

**The fee for the entire Master Exam is: \$300.00  
If you are accepted to take one part or the other, the fee is: \$150.00**

**Payment may be made by a check payable to CFO or by a credit card  
Please note that NO cash payments will be accepted**

## **Examination Contents**

The examination consists of Part I (multiple choice), Part II (drawing) and Part III (mechanical). Parts I & II will be given on the scheduled examination date. Note that Part II (drawing) will be given first, then Part I following.

**IMPORTANT NOTE: This is a partial open book exam. You may only bring a copy of the 2020 Plumbing Code of New York State for reference.** A calculator will be provided. Candidates are requested to bring two #2 pencils. Colored pencils are not allowed.

Successful candidates will have achieved a minimum passing grade of 75.0 on Part I and a minimum passing grade of 75.0 on Part II of the examination, allowing them to be eligible to take Part III. If you pass Part I or II, but fail the other part, you will receive credit for the part successfully completed for a period of one (1) year (a maximum of two (2) additional exams) before that part must be re-taken.

Part III will be scheduled separately upon passing Parts I & II.

## **Examination Part I**

1. Part I of the examination is a 50 question multiple choice exam. Your answers to these questions must be shown on a separate answer sheet provided to you. You will not be given credit for any question which has been answered incorrectly, left blank or has more than one answer marked.
2. Each question is worth two (2) points. There is a minimum passing grade of 75. A passing grade for Part I may be carried for a period of one (1) year (a maximum of two (2) additional exams) before that part must be re-taken.
3. The subject matter for Part I will include:
  - sanitary and storm drainage systems and sewers
  - water supply and distribution
  - knowledge of applicable codes
  - general trade practice
  - installation technique
  - special wastes
  - fixtures
  - business math
  - general math

Approximately 80% of the exam content for Part I is based upon the 2020 Plumbing Code of New York State and the Requirements for Implementation of the New York State Fire Prevention and Building Code - Plumbing and the "Local Law #9 amended by Local Law #6 (2004). The remainder of this Part consists of items in the area of plumbing related knowledge and practice, general math and business. Approximately 5 to 10% of the content is in each of these areas.

4. The time limit for Part I will be 2 hours (1:30pm-3:30pm). Some questions will require simple calculations and some questions may involve the use of charts and tables. Sample questions are attached to this information notice.

## **Examination Part II**

1. Part II of the examination will be the preparation of drawings for a structure which will require the applicant to design and layout plumbing systems incorporating the following areas:
  - **Code Requirements**
  - **Drainage System Layout and Sizing**
  - **Water Distribution System Layout and Sizing**
  - **Water Service Sizing and Backflow Protection**
  - **Sewers - Storm and Sanitary - Layout, Sizing and Appurtenances**
  - **Roof and Area Drainage - Layout and Sizing**
  - **Special Wastes**
  - **Isometric Drawings**

You will be required to use charts and tables from the 2020 Plumbing Code of New York State for determining sizing. You will be advised of the "weight of scoring" of each area of the exam at the time of the examination.

2. The minimum passing grade is 75. A passing grade for Part II may be carried for a period of one (1) year (a maximum of two (2) additional exams) before that part must be re-taken.
3. The time limit for Part II will be 5 hours (8:00am-1:00pm).

## **Examination Part III**

If a candidate passes both Part I and Part II, they will be deemed eligible to take Part III of the Master Plumbing Examination at a later date. Part III will consist of hands-on assembly such as soldering, brazing or other mechanical procedures. Candidates will be advised in advance of the specific instructions for this part.

## **Examination Reference**

The following publications provide the basis of and should be used as references for preparation for the exam:

1. The 2020 Plumbing Code of New York State. **Be sure to bring a copy of this reference to the exam.**
2. Requirements for Implementation of the New York State Fire Prevention and Building Code – Plumbing and the “Local Law #9 amended by Local Law #6 (2004)”. These documents are available from Plumbing Control.

Some of the questions will be based on field experience and knowledge of trade practices, therefore, questions will not be limited to these references.

**Code Book sold by:**

**I.C.C.  
2020 Plumbing Code of New York State  
ISBN: 978-1-60983-917-8**

**Telephone Number: 1-800-786-4452**

**[order@iccsafe.org](mailto:order@iccsafe.org)**

## Sample Questions

1. The minimum size of the water supply pipe serving a flush valve operated fixture is:
- a. 3/4"
  - b. 1"
  - c. 1 1/4"
  - d. 1 1/2"

*Answer: a*

2. The maximum distance of a vent from a 1 1/2" trap is:
- a. 3' at 1/4 " per foot slope
  - b. 4' at 1/2" per foot slope
  - c. 5' at 1/4 " per foot slope
  - d. 6' at 1/4" per foot slope

*Answer: d*

3. Copper tubing 1 1/2" and larger installed horizontally above ground must be supported at intervals no greater than:
- a. 5'
  - b. 6'
  - c. 8'
  - d. 10'

*Answer: d*

4. The pressure gauge reading at the base of a water tank filled to a depth of 2.5 feet is:
- a. 10.82 psi
  - b. 5.78 psi
  - c. 1.08 psi
  - d. 0.58 psi

*Answer: c*

5. A plumbing contractor is preparing a quotation for a plumbing installation. The quotation is based on the following information:
- Materials, labor and sales tax costs are \$2,875.00.
  - Overhead costs are 17% of the quoted price.
  - Desired profit is 6% of the quoted price.

What is the selling price, to the nearest \$100?

- a. \$3,500
- b. \$3,600
- c. \$3,700
- d. \$3,800

*Answer: c*

## Understanding Overhead and Profit

The following is an explanation of one method for showing the relationship of selling price, labor and material costs, overhead and profit. This is the method used to form questions and answers for this exam. Using another method may not result in a correct answer to the question. This is an explanation of how to determine the answer to question 5 on the previous page.

Selling price is determined by adding the cost of labor to the cost of material purchased and then adding an allowance for overhead and profit.

### **Expressed as an equation:**

$$\text{Selling Price (SP)} = \text{Labor \& Material Costs (C)} + \text{Overhead (O)} + \text{Profit (P)}$$

Overhead and profit are typically expressed as a percentage of the selling price. By adding the percentage of overhead and profit together and deducting the total from 100 percent, the balance is the percentage of the selling price represented by labor and material costs.

### **For example:**

If overhead costs are 17 % of the selling price and desired profit is 6 % of the selling price.

$$17 \% + 6 \% = 23 \%$$

$$100 \% - 23 \% = 77 \%$$

In this example, labor and material costs are 77 % of the selling price.

### **Expressed another way:**

$$0.77 \times \text{selling price} = \text{labor and material costs}$$

or

$$\text{selling price} = \frac{\text{labor \& material costs}}{0.77}$$

$$\text{Selling price} = \frac{\$2875}{0.77} = \$3733.77 \quad \text{to the nearest \$100} = \underline{\underline{\$3,700 \text{ (answer)}}}$$

This method can be used to quickly calculate the selling price if the labor and material costs and the percentage overhead and profit are known.



I hold certificates of competency as Master Plumber from the following Examining Boards of Plumbers:  
(give dates when granted)

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I am registered as a Journeyman Plumber with the following Examining Boards of Plumbers for this year:

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The first date I was registered as a Journeyman Plumber was: \_\_\_\_\_

I hereby certify that the above facts are true and correct and that I have not omitted any material fact bearing on my competency. I hereby apply for examination leading to a certificate of competency from the Onondaga County Examining Board for Plumbers.

Signed \_\_\_\_\_  
Date

Return Completed Form and Payment no later than End of Business on **Friday, September 27, 2024** to:

**Onondaga County Department of Water Environment Protection  
Division of Plumbing Control  
650 Hiawatha Blvd W  
Syracuse, NY 13204-1123**

**Please Note – APPLY EARLY...**

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