



PLUMBING CONTRACTORS GENERAL TRADE KNOWLEDGE EXAMINATION CONTENT INFORMATION

Revised March 2009

The General Trade Knowledge examination will be administered in two sessions on the second day of the exam. The morning session will consist of 45 equally weighted questions and 5 isometric drawings. The isometric drawings will be worth 10 points each. The afternoon session will consist of 65 equally weighted questions. Your scores for the morning and afternoon sessions will be combined to determine your total score for this examination.

The examination will have questions relating to the following systems and necessary knowledge for each system includes:

- reading and interpreting plans and specifications
- reading and interpreting codes
- basic mathematics (addition, subtraction, multiplication, division, percentages, decimals, square roots, calculations of area and volumes, calculating the sides of a triangle, and solving simple algebraic equations for unknown variables)
- required components and installation techniques
- maintenance techniques and analysis
- OSHA regulations
- isometric drawing and interpretation
- use of tools and equipment

You should be prepared to respond to examination questions on any of the content areas listed. Questions asked and content areas tested on previous examinations should not be assumed to be the only possible questions to be asked or content areas to be tested on this examination.

The percentage of questions shown for each content area may vary by as much as plus or minus three (3) percent. Please refer to the Candidate Information Brochure and the Reference List for additional information.

Content Area A Drainage

20%

1. Roof and Storm Drainage Systems

knowledge of load calculations
knowledge of accumulated roof areas
knowledge of area/pipe calculations
knowledge of flashing
knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

2. Sanitary Drainage Systems

knowledge of general plumbing skills
knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

3. Waste Piping Systems

knowledge of general plumbing skills
knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

4. Venting Systems (DMV)

knowledge of general plumbing skills
knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

5. Chemical Waste Drainage Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions
knowledge of different types of pipes
knowledge of treating of chemical waste
knowledge of dilution tanks

- 6. Industrial Water Drainage Systems**
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions
 - knowledge of proper treating of industrial waste

Content Area B **20%**
Water Distribution

- 1. Hot Water Distribution Systems**
 - knowledge of general plumbing skills
 - knowledge of thermal expansions
 - knowledge of circulating systems
 - knowledge of system sizing and designing
 - knowledge of equipment and materials
 - knowledge of code requirements
 - knowledge of terms and definitions
- 2. Water Distribution Systems**
 - knowledge of general plumbing skills
 - knowledge of system sizing and designing
 - knowledge of equipment and materials
 - knowledge of code requirements
 - knowledge of terms and definitions
- 3. Water Transmission Lines (Water Mains)**
 - knowledge of general plumbing skills
 - knowledge of system sizing and designing
 - knowledge of equipment and materials
 - knowledge of code requirements
 - knowledge of terms and definitions
 - knowledge of excavation and heavy equipment operation
 - knowledge of safety/shoring
- 4. Installation of Backflow Preventions for Water Services**
 - knowledge of installation procedures

Content Area C **15%**
Natural Gas Piping

- 1. Natural Gas Venting System**
 - knowledge of general plumbing skills
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions

- 2. Natural Gas Piping Systems**
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions
 - knowledge of combustion air requirements

Content Area D **20%**
Medical Gas Piping

- 1. Medical Gasses Piping Systems (Oxygen, Helium, Nitrous Oxide, Compressed Air)**
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions
 - knowledge of silver soldering, braising, and purging with nitrogen gas
- 2. Medical Gasses Vacuum Piping Systems**
 - knowledge of general plumbing skills
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions

Content Area E **10%**
Industrial Piping

- 1. Compressed Industrial Gas Piping Systems**
 - knowledge of general plumbing skills
 - knowledge of system designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions
- 2. Industrial Vacuum Piping Systems**
 - knowledge of system sizing and designing
 - knowledge of materials
 - knowledge of code requirements
 - knowledge of terms and definitions

**3. Sewage Disposal Systems
(Septic Tanks, Pumps, Lift Stations, and Interceptors)**

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

4. Process Piping Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

5. Oil and Gasoline Storage and Distribution Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

6. Steam Distribution Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of term definitions

Content Area F 5%
Swimming Pools, Wells, and Irrigation

1. Swimming Pool Piping Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

2. Water Wells and Irrigation Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

Content Area G 5%
Solar

1. Solar Water Heating Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions

Content Area H 5%
Fire Protection

1. Fire Protection Systems

knowledge of system sizing and designing
knowledge of materials
knowledge of code requirements
knowledge of terms and definitions