

This is an Illustrated Course.

1. **Download Quizzes** – Open – Print.
2. **Login** to your account using your ID and password.
3. **Start viewing** the course, one web page at a time.
4. The answers to the quiz questions are found on the course web pages.



5: Circle the correct answers on your printed copy of the quizzes as you study the course web pages.

Quiz questions track the web pages as you view them.

6. Refer to your printed quizzes to find the correct answers to each of the on-line quiz questions.

You will notice that the questions are exactly the same as your printed ones. This is just like an open book test.

Quiz 1

UPC TABLE 5-1 ¹ FIRST HOUR RATING											
Number of Bathrooms	1 to 1.5			2 to 2.5				3 to 3.5			
Number of Bedrooms	1	2	3	2	3	4	5	3	4	5	6
First Hour Rating, ² Gallons	42	54	54	54	67	67	80	67	80	80	80

¹ The first hour rating is found on the "Energy Guide" Label
² Non-storage and solar water heaters shall be sized to meet the appropriate first hour rating as shown in the table.

Question 1: Size of the water heater for a house with 3 Bathrooms and 4 Bedrooms.
 42
 54
 67
 80

Question 3: Size of the water heater for a house with 2 Bathrooms and 5 Bedrooms.
 42
 54
 67
 80

Question 2: Size of the water heater for a house with 1 Bathroom and 3 Bedrooms.
 42
 54
 67
 80

Question 4: Size of the water heater for a house with 3 Bathrooms and 6 Bedrooms.
 42
 54
 67
 80

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Question 5: Size of the water heater for a house with 1 Bathroom and 2 Bedrooms.

- 42
- 54
- 67
- 80

Question 6: Size of the water heater for a house with 1 ½ Bathrooms and 3 Bedrooms.

- 42
- 54
- 67
- 80

Question 7: Size of the water heater for a house with 2 Bathrooms and 3 Bedrooms.

- 42
- 54
- 67
- 80

Question 8: Washington State Amendments call for which code to be used for combustion air and installation of all vents and their connectors?

- 2006 UPC
- 2003 UPC
- Uniform Mechanical Code
- Fuel Gas Combustion Code

Question 9: No water heater shall be hereafter installed which does not comply in ____ respects with the type and model of each size thereof approved by the Authority Having Jurisdiction

- All
- Some
- Most
- A few

Question 10: The national standard to be used to size the minimum diameter of a vent for a Category 1 appliance is:

- 2006 UPC
- NFPA 54:3.3.7
- WAC Chapter 52
- 2005 NEC

Question 11: A chimney can have more than 1 passageway. Definition adopted in Washington State.

- Yes
- No

Question 12: A chimney is required to be vertical. Definition adopted in Washington State.

- Yes
- No

Question 13: A factory-built chimney is required to be comprised of listed-only,

factory-built components. Definition adopted in Washington State.

- Yes
- No

Question 14: A field-constructed masonry chimney must use Portland cement that has re-enforcing bars. Definition adopted in Washington State.

- Yes
- No

Question 15: A field-installed flexible metal flue liner is considered to be a metal chimney.

Definition adopted in Washington State.

- Yes
- No

Question 16: If combustible materials do not include flame-proofed, fire-retardant treated, or plastered material.

- True
- False

Question 17: Direct-vent appliances are required to be constructed and installed so that all flue gases are discharged to the outside atmosphere.

Definition adopted in Washington State.

- Yes
- No

Question 18: Direct-vent appliances are required to receive all air for combustion directly from the outside atmosphere.

Definition adopted in Washington State.

- Yes
- No

Question 19: A direct-vent appliance must obtain a percentage of its combustion air from the interior of the house.

Definition adopted in Washington State.

- Yes
- No

Question 20: A flue collar is that portion of an appliance designed for the attachment of a draft hood, vent connector, or venting system.

Definition adopted in Washington State.

- Yes
- No

Question 21: It is permitted to use Type B gas vent with Category II, III, or IV gas appliances. Definition adopted in Washington State.

- Yes
- No

Question 22: It is permitted to use Type L vent material on appliances listed for use with Type B gas vents.

Definition adopted in Washington State.

- Yes
- No

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Question 23: The Type L Pellet Vent is rated for flue temperatures exceeding 570° F.

Definition adopted in Washington State.

Yes No

Question 24: An indirect-fired water heater consists of a storage tank equipped with an internal or external heat exchanger to transfer heat from an external source to heat potable water.

Definition adopted in Washington State.

Yes No

Question 25: A vent is a passageway used to convey flue gases from gas -fueled equipment or their vent connectors to the outside atmosphere.

Definition adopted in Washington State.

Yes No

Question 26: A vent connector is the pipe or duct that connects an electric appliance to a vent or chimney.

Definition adopted in Washington State.

Yes No

Question 27: A venting system is a continuously open passageway to the outside atmosphere for the purpose of obtaining air for combustion.

Definition adopted in Washington State.

Yes No

Question 28: A water heater is an appliance that supplies hot water for domestic purposes and commercial purposes.

Definition adopted in Washington State.

Yes No

Question 29: Which activities can be performed on a water heater without a permit?

maintenance

installation

removal

replacement

Question 30: An inspection of a chimney or vents must be made after installation before these vents or their parts covered or concealed.

Definition adopted in Washington State.

Yes No

Question 31: When must a final water heater inspection be made by the AHJ? When the work authorized by the permit is installed.

When the installation has been installed to code.

Prior to covering or concealing any of the work.

All of the above.

Question 32: It is permitted to install a B-vent style water heater in a bathroom if it is installed in the linen/towel closet and is not visible.

True

False

Question 33: A water heater installed in a bedroom must meet which of the following requirements?

Be located in a closet exclusively for the use of the water heater.

The closet must have a combustion air vent obtaining air from outside.

Must have self-closing hinges on the door.

Must have gaskets around the entire door.

All of the above.

Question 34: A water heater must be located as close as practicable to a chimney or gas vent.

True

False

Question 35: Listed water heaters are NOT always required to be installed in accordance with their manufacturers instructions.

True

False

Question 36: All unlisted water heaters shall be installed with a clearance of at least 12 inches on all sides and rear.

True

False

Question 37: All water heater installations are to be provided with over-pressure protection by means of an approved listed device.

True

False

Question 38: Only unlisted water heater installations shall be provided with over-temperature protection.

True

False

Question 39: Installation of temperature, pressure, and vacuum-relief devices and automatic gas shutoff devices-, shall be in

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accordance with the terms of their listings and NOT the manufacturers instructions.

True
False

Question 40: A shutoff valve shall be placed between the relief valve and the water heater, or on discharge pipes between these valves and the atmosphere.

True
False

Question 41: The Btu hourly discharge capacity or the rated steam relief capacity of the pressure relief device shall NOT be less than the input rating of the water heater.

True
False

Quiz 2

Question 1: Prior to installation of an oil-burning water heater, the AJH must approve its location.

True
False

Question 2: The reference code for an oil-fired water heater is:

Uniform Mechanical Code
2006 UPC
NFPA 31
Flue Gas Code

Question 3: An indirect-fired water heater must conform to which of the following Codes.

ASME Boiler/ Pressure Vessel Code
Uniform Mechanical Code
2006 UPC

Question 4: Each indirect -fired water heater shall have a label that meets _____ requirements.

UPC
UMC
ASHREA

ASME
RSES

Question 5: The pressure relief on a hot water boiler connected to an indirect-fired water heater is limited to a maximum of _____ psig.

10
20
30
40
50

Question 6: The transfer medium for a indirect-fired water heater is potable water or a fluid with a toxicity rating of :

Class of 1
Class of 2
Class of 3
NON-Classified

Question 7: The toxicity rating is determined from the following?

Merck Chemical Digest
US Encyclopedia of Chemistry
Pharmacy Digest
Clinical Toxicology

Question 8: Questions about combustion air and ventilation requirements are answered in:

2006 UPC
Mechanical Code
Fuel Gas Code
NFPA 31

Question 9: The Authority Having Jurisdiction always requires the use of an approved dielectric insulator on the water piping connections of water heaters and related water heating equipment.

True
False

Question 10: In seismic Category F water heaters NOT required to be anchored or strapped.

True
False

Question 11: Upon installation, a water heater shall be strapped at points within its upper third and lower third areas.

True
False

Question 12: At the lower strapping point of a water heater, the strapping shall be at minimum distance of 4 inches above the controls.

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True
False

Question 13: A water heater supported from the ground shall rest on level concrete or other approved base with a height of at least 3 inches with a height of at least 3 inches above the surrounding ground level.

True
False

Question 14: When a water heater is located in an attic, where damage may result from a leak, a watertight pan without a drain shall be installed beneath the water heater.

True
False

Question 15: A discharge pipe from a pressure relief valve is permitted to discharge into the water heater drip pan.

True
False

Question 16: A Non-direct-vent type gas appliance installed in a beauty shop that uses flammable aerosol sprays shall be located in a separate equipment room that has outside combustion and dilution air.

True
False

Question 17: Process air shall be provided for comfort and proper working conditions for personnel.

True
False

Question 18: Open flame gas water heaters are allowed near facilities that transmit flammable vapors.

True
False

Question 19: A gas furnace or water heater in a residential garage, separate from the living space, shall be installed so that all burners and the ignition system are at least _____ inches above the floor, unless it is listed as flammable vapor ignition resistant.

12
16
18
24
28

Question 20: Installation of a water heater in a residential garage is permitted when it is installed at the proper height and

is protected against damage by a moving vehicle.

Yes
No

Question 21: When is the Installation of a water heater (non-flammable vapor ignition resistant type) at floor level in a residential garage permitted?

Never.

Only when the garage is used for storage and not for parking cars.

When it is located in a separate room, not accessible from the garage with air supply outside the garage.

Anytime.

Question 22: When installing gas equipment in an underground parking facility, what code needs to be followed?

NFPA 31
NFPA 62
NFPA88A
Mechanical Code
None of the above

Question 23: When is a gas-fired water heater allowed in a repair garage?

NEVER

When it is located in a detached room with 1-hour fire walls.

Any time

With in regulations

Question 24: In a repair garage, a heater is permitted to be installed if it is at least _____ feet above the floor?

8
10
12

None - there are no exceptions.

Question 25: Gas-fired equipment installed in an Aircraft Hanger must conform to the following code:

NFPA 409
NFPA 31
NFPA 65
NFPA 88A

Question 26: When is it required to use guard rails on equipment located outside?

Only near traffic areas

Never

Always

On Class 2 arterial roads

Question 27: By code, which of the following must be left at the job site by the

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installation crew upon completing a water heater installation?

- Manufacturers instructions.
- Phone number of installation company.
- Copy of invoice.
- Business cards for installation company.

Question 28: Can indoor equipment be installed outdoors?

- Never
- Yes
- Maybe, if special protection is furnished for the equipment.

Question 29: On rooftops, the minimum clearance between a service panel and the wall of the enclosure is _____ inches.

- 16
- 24
- 30
- 36
- 48

Question 30: At least _____ feet of clearance shall be available between any part of the equipment and the edge of a roof, and shall have guardrails at least 42 inches in high.

- 3
- 6
- 8
- 10
- 12

Question 31: On a roof top, the electrical disconnect must be:

- A. Readily accessible
- B. Within sight
- Both A & B
- Neither A or B

Question 32: On roof top equipment, a 120-volt, grounded receptacle must be supplied.

- True
- False

Question 33: Buildings over _____ feet in height shall have an inside means of access to the roof, unless other means of access are acceptable to the Authority Having Jurisdiction.

- 10
- 15
- 20
- 28

Question 34: The minimum trap door size shall be _____ inches.

- 22x24
- 24x30
- 28x36
- 32x 36

Question 35: Permanent lighting shall be provided at the roof access, with a switch located inside the building near the access leading to the roof.

- True
- False

Question 36: Attic access shall have a passageway of at least _____ inches.

- 22x24
- 22x30
- 28x36
- 32x 36

Question 37: If the attic is under 6 feet in height, the distance to the appliance shall not exceed _____ feet.

- 15
- 20
- 28
- 30

Question 38: The width of a passageway in an attic should be at least _____ inches.

- 16
- 18
- 24
- 28
- 32

Question 39: In an attic, the size of a level platform in front of a gas appliance attic should be at least _____ inches.

- 24 x24
- 30x 30
- 32 x 32
- 36 x 36

Question 40: In an attic, is it required that a 120-volt receptacle and a lighting fixture be near the appliance?

- Yes
- No