

# NITC Journey Level Plumber - Quiz Questions with Answers

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## General Knowledge of the Uniform Plumbing Code

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General Knowledge of the Uniform Plumbing Code

1.

What is the minimum required distance to strap 1" copper?

6 feet

8 feet

4 feet

12 feet

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*Correct answer: 6 feet*

*The minimum required distance to strap 1" copper is 6 feet. The code states that any suspended piping must be supported. 8 feet and 12 feet would fall outside of the chart for one inch pipe, and thus would not be an acceptable distance. 4 feet would be accepted by an inspector, but does not meet the minimum required distance description per the code.*

*See table 313.3.*

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2.

Domestic dishwashers must discharge through a(n) \_\_\_\_\_ waste.

**indirect**

direct

disposer

grease trap

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*Correct answer: indirect*

*The dishwasher must discharge indirectly with the use of an air gap. This can be done with a fitting or through the use of a high loop before tying it into the sink or disposal. A disposal is not required to be installed on a kitchen sink.*

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3.

All pipes and drains must be \_\_\_\_\_ when located under an accessible lavatory or sink.

**insulated**

secured

labeled

rigid

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*Correct answer: insulated*

*Anytime there is an accessible sink, the water piping and drain piping must be insulated. There are other types of materials that can be used, like protectors or insulators. This is to protect the public from any potential burns.*

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4.

In regards to rodent control and drain inlets, what is the maximum size the drain grate can allow?

1/2"

3/8"

1"

1/4"

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*Correct answer: 1/2"*

*The code states that the drain grate must have a maximum of 1/2" openings in the grate in order to keep rodents from exiting or entering the system.*

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5.

An eyewash is required to have which of the following?

**Clear signage**

Drain

Hot water

Backflow preventer

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*Correct answer: Clear signage*

*The eye wash must have clear signage on what it is and where it's located. It does not require a drain but can have one. The code doesn't say that there needs to be hot water. The eye wash also does not need a backflow preventer.*

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**6.**

What is the minimum size access panel that should be provided if using a concealed slip joint?

**12 inches**

2 feet

16 inches

18 inches

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*Correct answer: 12 inches*

*If concealing a slip joint of any type, they must be accessible and have an access panel of 12 inches as the minimum size. It must be free and clear in order to make any repairs or inspections.*

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7.

Trough-type and invisible seal urinals must \_\_\_\_\_ be installed.

**Never**

Always

Sometimes

Occasionally

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*Correct answer: never*

*These types of urinals are prohibited and cannot be installed no matter the situation or circumstances.*

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8.

Flush tanks in water closets must be provided with \_\_\_\_\_ that will discharge into the water closet or urinal that is connected in the event that it runs.

**overflows**

floats

flushes

bypass

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*Correct answer: overflows*

*The flush tanks must have an overflow tube that will allow the water to go directly into the bowl of the water closet. This allows safety if the toilet were to run continuously with no use. The other items are not suitable fixes for the scenario above.*

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9.

Which of the following shower drains would not be permitted due to size?

1.5 inches

2 inches

3 inches

4 inches

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*Correct answer: 1.5 inch*

*The shower drain receptors must have a minimum of 2 inch outlets, so the 1.5 inch outlet would not be an acceptable size drain for a shower. Depending on the size of the shower, the other sizes could be used to handle more drainage fixture units.*

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10.

An assembly of equipment and piping that is used to distribute nonflammable gases is called:

**Medical gas system**

Gas piping system

Water supply system

Waste supply system

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*Correct answer: medical gas system*

*The medical gas system is in charge of distributing oxygen, nitrous oxide, compressed air, carbon dioxide, and helium. These constitute non-flammable gasses.*

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11.

\_\_\_\_\_ pressure is the existing pressure without any flow.

**Static**

Residual

Reduced

Elevated

---

*Correct answer: Static*

*Static pressure is the standing pressure without any flow throughout the system. This is recommended to be no higher than 80 psi. Residual pressure is what is the standing pressure when there is flow going through the system. Reduced and elevated pressure are usually caused by external factors.*

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**12.**

What is the minimum distance that a water closet or bidet can be installed next to another plumbing fixture?

**30 inches center to center**

24 inches center to edge

32 inches center to center

40 inches center to edge

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*Correct answer: 30 inches center to center*

*When installing a water closet or bidet, the center line of the neighboring fixture must be a minimum of 30 inches away.*

*(Refer to 2021 UPC 402.5)*

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**13.**

What type of material should a plumbing fixture be constructed of?

**Dense, durable, and non-absorbent**

Durable, water-proof, and flexible

Dense, flexible, and porous

Durable, dense, and flexible

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*Correct answer: Dense, durable, and non-absorbent*

*A material used for a plumbing fixture should be constructed of dense, durable, and non-absorbent material. The other options do not contain the necessary traits per section 401.2.*

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14.

Which of the following best describes a mixing valve that senses incoming hot and cold water pressures, that can help compensate if there are fluctuations in pressure?

**Pressure-balancing valve**

Check valve

Gate valve

Ball valve

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*Correct answer: Pressure-balancing valve*

*The pressure balancing valve allows a steady stream of tempered water no matter what else is occurring in the rest of the system. This is in every shower system that is up to code.*

*The check valve, ball valve, and gate valve do not balance the two types of water.*

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15.

A water closet/ bidet must have \_\_\_\_\_ and \_\_\_\_\_.

**light, ventilation**

light, door

door, ventilation

ventilation, outlet

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*Correct answer: light, ventilation*

*Principle 16 is what states the requirements for toilets and bidets that are located in a compartment or their own room. In either scenario, they require that a light and ventilation are installed to meet the code requirements. A door or outlet is not required but may be installed for other purposes.*

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16.

What is the main purpose of a p-trap?

**To seal sewer gases**

To prevent cross-connections

To prevent back-ups

To collect debris

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*Correct answer: To seal sewer gases*

*The main purpose of the p-trap is to prevent any sewer gasses from escaping into the building.*

*Backflow preventers prevent cross connections, backwater valves prevent back-ups when located upstream of the clog, and wye strainers are devices that can be installed on potable systems to catch large debris that may be present in the water.*

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17.

Which of the following is the only material that can be fusion welded?

**Polypropylene**

PE-RT

PEX-AL-PEX

CPVC

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*Correct answer: Polypropylene*

*Polypropylene is the only material that can be used and connected through fusion welding. This can be done without fitting and with socket type fittings as well. The others are not permitted to be fusion welded.*

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**18.**

When dealing with a public lavatory in transient bathrooms, what must the maximum temperature be?

**120°F**

130°F

110°F

115°F

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*Correct answer: 120°F*

*Anytime the lavatory is for the public to use, it must be regulated at a max of 120°F. It may be less, but not higher.*

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19.

Before an underground water supply passes an inspection, which of the following must be done with the piping?

**Tested and uncovered**

Tested and covered

Tested and photographed

Covered and photographed

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*Correct answer: Tested and uncovered*

*The piping must be tested and uncovered in order for the inspection to happen. The piping may be photographed for future use and documentation is always helpful down the line, but it is not a needed process when discussing the inspection process.*

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20.

What is best described as a receptor that is designed to collect surface or storm water from an open area?

**Area drain**

Storm leader

Floor drain

Floor sink

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*Correct answer: Area drain*

*An area drain is the receptor for open areas and spaces to collect and receive standing water. This is different from a leader. The leader helps move the water from the roof to the ground. Floor drains and floor sinks are similar types of devices that do not handle storm water.*

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21.

Which of the materials below cannot have a push style fitting installed?

**Malleable iron**

Copper

Poly

PVC

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*Correct answer: Malleable iron*

*Push fittings are designed for an array of different materials and sizes of piping, but malleable iron is the one that does not have any that are manufactured for its material, regardless of its use for either gas or water. The others are all capable of having a push connect fitting on them.*

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**22.**

What is the minimum size of a tailpiece for a lavatory, and other similar fixtures?

**1.25 inches**

1.5 inches

2 inches

3 inches

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*Correct answer: 1.25 inches*

*The minimum size tailpiece for any continuous waste and fixture tailpieces must be at a minimum of 1.25 inches. The traps may be bigger, but the most common size of the lavatories tailpieces will be 1.25 inches.*

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**23.**

Which of the fixtures below are not needed to meet the basic requirements of sanitation and hygiene?

**Hose bib**

Water closet

Lavatory

Bathtub/shower

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*Correct answer: Hose bib*

*A hose bib is not one of the fixtures that are needed in order to meet the code's standard of sanitation and hygiene. A water closet, lavatory, kitchen sink, shower/tub are needed in order to meet the requirements.*

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**24.**

Which of the following is the abbreviation for cross-linked polyethylene?

**PEX**

PE

PB

PVC

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*Correct answer: PEX*

*PEX is the abbreviation for cross-linked polyethylene.*

*PE stands for polyethylene which is used in underground gas, PB stands for polybutylene which is piping that is no longer used as water piping. PVC which is used mainly for DWV.*

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**25.**

When setting a water closet, the measurement from a wall to the center of the water closet must be no less than \_\_\_\_\_ inches.

**15**

12

10

8

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*Correct answer: 15*

*Any partition or wall must have a minimum of 15 inches from that to the center of the water closet. There is not a situation that would allow less than 15 inches.*

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**26.**

Which of the following fixtures cannot be installed inside of a public bathroom?

**Drinking fountain**

Urinal

Water closet

Hose bib

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*Correct answer: Drinking fountains*

*Drinking fountains cannot be installed inside of toilet rooms, and a public bathroom is considered a toilet room. The other items are allowed to be installed inside of toilet rooms.*

*(Refer to 2021 UPC)*

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27.

A combination \_\_\_\_\_ and \_\_\_\_\_ is a specialty waste piping system that utilizes the horizontal wet vent, along with common waste and vent piping.

**waste, vent**

sewer, gas

water, vent

gas, vent

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*Correct answer: waste, vent*

*The combination waste and vent system is a system that uses horizontal wet venting along with common waste and venting. The system uses adequately sized drainage and vent piping to allow free flowing air on the top side of the piping.*

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28.

What is it called when the Authority Having Jurisdiction has reasonable cause to think that there are unsafe, unsanitary, dangerous, or hazardous situations on the premises?

**Right of entry**

Exempt Work

Permitting

Inspection

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*Correct answer: Right of entry*

*This isn't a common practice, but when needed it can be enforced. The main part of the code is to protect the public in all different types of ways and this is one of those items that can trickle over into public service. Other service departments may be needed to help enforce them.*

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**29.**

An anodeless fitting that is used to transition underground gas to above ground is called a:

**transition riser**

elbow

street 90

coupling

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*Correct answer: transition riser*

*Transition risers are used when transitioning from poly pipe that is underground that will transition to hard pipe. The elbow, street 90, and coupling are all fittings that will be seen above ground or below, not as a transition.*

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**30.**

What is the minimum size required when sizing vents?

**1.25 inches**

1 inch

1.5 inches

2 inches

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*Correct answer: 1.25 inches*

*The minimum size allowed for a vent is 1.25 inches. That doesn't mean every fixture can be run in 1.25 inches. It would need to meet the sizing requirements. No vents can be run on anything less than 1.25 size piping.*

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**31.**

What is the minimum required clearance in front of a shower?

**24 inches**

20 inches

22 inches

18 inches

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*Correct answer: 24 inches*

*The minimum required distance for clearance in the front opening of the shower must be 24 inches. It cannot be any less than that.*

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**32.**

No waste piping should be installed outside, attics or crawl spaces, or in exterior walls unless necessary. This is to prevent:

**freezing**

tampering

backflow

back-ups

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*Correct answer: freezing*

*In regions where freezing is possible, this is enforced more strictly because it can directly affect the whole system. It is best practice to avoid having waste pipes in any of the locations above.*

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**33.**

Handheld showers must have a(n):

**internal backflow preventer**

bracket

flow restrictor

removable aerator

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*Correct answer: internal backflow preventer*

*Handheld showers must have an internal backflow preventer.*

*This is the same concept as any siphonage or black flow. The possibility being a handheld shower could be submersed in a receptor which could then allow water to backflow into the potable water system. That's where an internal check valve comes into the mix. Most manufacturers have these built in. The bracket, flow restrictor, and the aerator are all components of the handheld but do not fit the term required.*

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**34.**

The \_\_\_\_\_ is a vertical drainage pipe that is used for receiving the discharge of storm water drains and gutters.

**leader**

waste

vent

drain

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*Correct answer: leader*

*The leader is strictly involved with storm water systems and gutter systems. The other three items are directly related to building drains and not storm systems.*

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**35.**

Which of the following would require a permit to be pulled when working on a plumbing system?

**Water heater**

Leak on a drain

Leak on the water supply system

Drain cleaning

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*Correct answer: Water heater*

*The water heater is the only listed scope of work that would require a permit to be pulled. The leak on the drain and the water system are both exempt from needing a permit, along with the drain cleaning. This also does not need a permit.*

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**36.**

How often must PVC/ABS be supported horizontally?

**4 feet**

5 feet

6 feet

8 feet

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*Correct answer: 4 feet*

*No matter the size of the PVC/ABS, they must be supported every 4 feet and not more. Supports may be added more frequently, but they must not exceed the 4 foot rule.*

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**37.**

If a fixture has any slip joint connections and is concealed, what must be done?

**It must have an access panel.**

The joints must be tight.

It must be inspected yearly.

None of the above

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*Correct answer: It must have an access panel.*

*Slip joint connections do not need to be inspected yearly, but they can be known to shift over time, which is why they need to be accessible for repair or replacement.*

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38.

A(n) \_\_\_\_\_ is best described as a combination of elbows in a line of piping that brings one section of piping out of a line but into a line that runs parallel with the existing piping.

offset

splice

rearrangement

tie in

---

*Correct answer: offset*

*An offset is best described as the combination of elbows that brings one section of the piping out of a line but then runs parallel with the existing pipe. The term splice, and rearrangement, and tie in are unorthodox methods of communicating the above, but the proper term, per the code book, is an offset.*

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**39.**

What is the permitted way to secure a wall-mounted water closet?

**Carrier**

Cast Iron piping

Support under water closet

Studs

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*Correct answer: Carrier*

*The carrier systems are required for any wall-hung water closet. This allows for the drain and the bolts to secure the toilet from being free of any supports on the finished side. Although the piping can be cast iron, the carrier is additional. The other two items are not sufficient ways to secure a water closet.*

---

40.

When an inspection fails, what must occur?

**Reinspection**

Take the system off test

Cover up the system

Move on to the next phase of work

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*Correct answer: Reinspection*

*When the inspection does not pass, it must be reinspected. There sometimes are fees that are involved depending on the jurisdiction. When calling in to get something inspected, always make sure that everything is ready and good to go.*

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**41.**

Best practices require that the end of any pipe be reamed and free of any debris. The main purpose of this is to:

**allow free flow through the pipe**

avoid injuries

trim the pipe to the proper length

make the pipe fit securely

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*Correct answer: allow free flow through the pipe*

*Although the other items can be important, the sole and main reason for reaming the pipe is allowing free flow through the pipe. By doing so, you may achieve the other listed reasons, but it does not state those as the main reason.*

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**42.**

The \_\_\_\_\_ pipe is the pipe that receives the discharge of water closets, urinals, and other fixtures that collect and remove domestic sewage.

**soil**

vent

water

sewer

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*Correct answer: soil*

*The soil pipe is the term called for collecting and removing any domestic sewage. Venting, water and sewer are not proper descriptions of the above.*

---

**43.**

Which of the following best describes a device that is installed on a drainage system that can prevent reverse flow?

**Backwater valve**

Check valve

Backflow preventer

Double check

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*Correct answer: Backwater valve*

*The backwater valve is installed in the event that there was a backup outside of the home so that the home would be more protected from any damage from a backup. It could still backup if the problem was severe enough. The other devices are backflow preventers but they are designed for potable water systems, not drainage systems.*

---

**44.**

The pressure that is left over after all of the friction loss, head pressure, and the other losses during demand is called:

**residual**

static

elevated

reduced

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*Correct answer: residual*

*This is the opposite of static, and is the working pressure available after all of the other factors are taken into account, such as friction loss, head pressure, and the total pressure loss experienced under demand use. The others do not fit the description above. They describe the abundance, or shortage, of pressure.*

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**45.**

When using shielded couplings on cast iron, how often must the piping be supported?

**Every 4 feet**

Every 5 feet

Every 6 feet

Every 7 feet

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*Correct answer: Every 4 feet*

*When using cast iron that connects with no hub fittings or an elastomeric shielded coupling, the piping must be supported every 4 feet, or every other joint unless it spans over 4 feet. It is not permitted to be supported any more than 4 feet.*

---

**46.**

Which of the following would need an elongated toilet?

**Employee restroom**

Condo

Single family residence

Private apartment

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*Correct answer: Employee restroom*

*This is strictly based on the needs for public use. Anytime the bathroom is open to the general public, it needs to be elongated.*

*The other three options are all private dwellings and have the choice of elongated or round toilets.*

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**47.**

What is the minimum length that the vent stack must terminate through the roof flashing when terminating vertically?

**6 inches**

8 inches

10 inches

12 inches

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*Correct answer: 6 inches*

*A vent stack must terminate a minimum of 6 inches through roof flashing when terminating vertically.*

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**48.**

Which of the following connections can be made on CPVC?

**Solvent cemented**

Fusion welded

Compression

Threaded

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*Correct answer: Solvent cemented*

*CPVC is designed to apply primer and the associated cement to secure the fittings. Although CPVC will fit certain compression fittings, they are not rated to do so. It also cannot be threaded or fused.*

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**49.**

The arrangement of piping and regulators after the point of delivery is called:

**gas piping system**

water piping system

waste removal system

waste disposal system

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*Correct answer: gas piping system*

*Although this terminology can be similar for all systems, this pertains to the gas piping system. The other systems will not have gas regulators that could be a part of those systems.*

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**50.**

What is the minimum required distance between a urinal and a water closet?

**30 inches**

15 inches

22 inches

36 inches

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*Correct answer: 30 inches*

*The minimum distance between two fixtures must be 30 inches from center to center. If there is a wall or a partition, then the distance can be 15 inches from that wall or partition to the center of the fixture.*

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51.

Hose bibs require what type of back flow device?

**Vacuum breakers**

Reduced pressure zone assembly

Double check valve

Check valve

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*Correct answer: Vacuum breakers*

*There are two different variations when it comes to vacuum breakers and hose bibs. One is considered a frost proof hose bib that usually has a vacuum breaker built into the top of it. The other version is a standard hose bib where a threaded vacuum breaker can be threaded onto the outlet. The double check valve and the reduced pressure zone assembly are utilized for higher risk cross connections such as a sprinkler system or for an auto fill for a pool.*

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**52.**

Who is in charge of authorizing a permit?

**Authority having jurisdiction**

Inspector

Builder

State plumbing board

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*Correct answer: Authority having jurisdiction*

*Although the other three parties have very important roles in the process of licensing and permitting, only the authority having jurisdiction will sign off and authorize the work to commence.*

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**53.**

What does the code establish?

**Minimum requirements and standards**

OSHA guidelines

Best practices

Plumbing defects

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*Correct answer: Minimum requirements and standards*

*The code is an ordinance that establishes the minimum requirements that are required to ensure safety for public health, safety, and welfare.*

*OSHA guidelines, while also very important, do not set the standard on how plumbing systems should be installed. The code does not establish best practices nor does it deal with plumbing defects.*

---

**54.**

The receptor that receives the discharge from the drainage system and is designed to retain solids and disperse the remaining liquids through an approved system is best described as a:

**septic tank**

seepage pit

sewage pit

sewage pump

---

*Correct answer: septic tank*

*The septic tank is usually found in areas where there is not a public sewer, usually in more rural areas or larger lots. The concept of septic systems is to collect the solids and they will naturally digest the organic matter, while the liquids pass through and disperse through a seepage pit (sometimes commonly known as a leech field).*

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**55.**

The plumbing must be installed with regard and preservation of the strength and structural members. Which principle is this?

**Structural safety**

Light and ventilation

Proper maintenance

Test the system

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*Correct answer: Structural safety*

*Anytime the plumbing system is installed or modified, these practices must always apply. Craftsmanship is apart from the code and it must be at the forefront of any installation.*

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**56.**

Which of the fixtures below is allowed to be without a vent when the limitations of the construction allow it?

**Bar sinks**

Hand sinks

Kitchen sink

Mop sink

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*Correct answer: Bar sinks*

*Sinks that are attached to bar cabinets and soda fountains are allowed to be ventless due to the limitations and construction of the fixtures. These wastes must use an indirect waste as the outlet receptor.*

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**57.**

The lowest part of the drainage system which receives waste from soil and waste pipes is called the building:

**sewer**

drain

branch

vent stack

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*Correct answer: sewer*

*When the building drain conveys inside the dwelling, it is considered the "building drain." When the connection spans 2 feet from the outside of the dwelling, it then transitions to the building sewer. The name changes from the building drain to the building sewer once it extends 2 feet from the outside of the dwelling walls. The others, although a part of the drain system, are not components of the specifics of the building drain or the building sewer.*

---

**58.**

What is the maximum consumption for a urinal?

**1 gallon**

1.28 gallons

1.6 gallons

1.25 gallons

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*Correct answer: 1 gallon*

*Urinals cannot exceed 1 gallon per flush.*

*(Refer to 2021 UPC 412.0)*

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**59.**

When designing a system, \_\_\_\_\_ fixtures should be accounted for in the design of the original plans.

**future**

working

shower

cold water

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*Correct answer: future*

*If there are future plans to have additional fixtures when designing the system, they must be accounted for and ensure the sizing is designed for the future fixtures as well. They must also be capped off and terminated properly.*

---

**60.**

Which of the following defines a toilet that is comprised of a sump and girding pump along with a point of discharge?

**Macerating toilet**

Flushometer

Pressure assisted toilet

Public toilet

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*Correct answer Macerating toilet*

*This device is comprised of an all-in-one system: a toilet, sump basin, and macerating system. This is used in applications where a toilet cannot be gravity drained out.*

---

**61.**

What is the minimum clearance for the front of any water closet or bidet?

**24 inches**

15 inches

30 inches

12 inches

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*Correct answer: 24 inches*

*24 inches is the minimum clearance that is needed for adequate clearance in front of the water closet.*

*12 and 15 inches are not far enough clearance. 30 inches would be acceptable, but it is not the minimum required clearance.*

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**62.**

Whirlpool bathtubs that have the Jacuzzi function must have access that is sized properly for what reason?

**Pump replacement**

Routine maintenance

Original install

Safety

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*Correct answer: Pump replacement*

*Access is very critical for future repairs and replacement. The pumps can be rather large and uniquely shaped so that access must be able to accommodate the removal of the pump and the replacement.*

---

**63.**

A \_\_\_\_\_ unit is considered a way of quantifying the load producing effects on a plumbing system.

**fixture**

thermal

fuel

water

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*Correct answer: fixture*

*The fixture unit is a way of quantifying the load producing effect that all different fixtures can have an effect on the plumbing system as a whole, based on the specifications of the different fixtures.*

---

**64.**

The \_\_\_\_\_ is the principle artery of the venting system that has a system of continuous piping to which branches can be connected to.

**main vent**

branch vent

yoke vent

wet vent

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*Correct answer: main vent*

*The main vent is usually the largest in diameter if there are other branches that tie into it. There could be multiple main vents depending on how the system is designed. Branch and yoke vents are not typically the main vent, but the branches and the wet vent are designated as a drain and vent, not the main vent.*

---

**65.**

Where there is a gang shower, how many temperature-controlled devices should there be?

**One**

Two

Three

Same amount as showerheads

---

*Correct answer: One*

*No matter how many shower heads there, there only has to be one mixing valve for the whole gang of showers. This allows control over the temperature for each one.*

---

**66.**

Why must a potable water system be chlorinated at 50 Parts Per Million (PPM) for 24 hours?

**Because a cross connection has been discovered**

Due to high pressure

Due to low pressure

It must be done any time there's a leak.

---

*Correct answer: Because a cross connection has been discovered*

*This is a direct result of discovering a cross connection that could have the potential to cause harm, so this method is used to kill any bacteria that may be present.*

*Although high pressure, low pressure, and leaks in the system can be problematic, these are not direct causes of a system needing to be chlorinated. Cross contamination is the only reason a system would need to be chlorinated.*

*(Refer to 2021 UPC 1502.3.3)*

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67.

What is the vertical distance between the opening of a water supply and the flood rim of a receptacle considered?

**Air gap**

Cross connection

Air admittance valve

Critical level

*Correct answer: Air gap*

*This air gap best describes the utilization of an air gap for the drainage system. This is most commonly seen in indirect waste.*

*A cross connection is a point in a plumbing system where the potable (drinking) water supply is connected to a non-potable source. An air admittance valve is a one-way mechanical valve that is installed locally at the site of a plumbing fixture, allowing proper venting to occur without a connection to a larger venting system and stack vent. The critical level is the elevation level below which there is a potential for backflow to occur.*

---

68.

What are flexible PVC hoses and tubing utilized in bathtubs?

**Whirlpool systems**

Drain

Water piping

Ventiing

---

*Correct answer: Whirlpool systems*

*The flexible PVC is designed for the water circulation or pneumatic air systems in whirlpool tubs. The other answers do not specify using flexible PVC piping or tubing.*

---

**69.**

What is best described as a pressure less than what is exerted by atmospheric pressure?

**Vacuum**

Vent

Yoke vent

Circuit vent

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*Correct answer: Vacuum*

*The concept of a vacuum is important to understand because the process of relieving vacuums is a constant standard in plumbing. Any time a vacuum is present, it can cause back flow issues.*

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70.

A device that helps maintain the seal of the trap is called a:

**trap primer**

trap weir

p-trap

s-trap

---

*Correct answer: trap primer*

*The trap primer is a device that will divert water to the p-trap, if it is an uncommonly used fixture or just to maintain the trap seal. Trap weir is the depth of the trap, p-trap is the name of the trap, and an s-trap is an illegal form of trapping a fixture.*

---

71.

Which of the following best describes a part of the potable water system which water does not circulate through or flow through?

**Dead leg**

Abandoned

Recirculating line

Clogged line

---

*Correct answer: Dead leg*

*Dead legs are a part of the potable water system which water does not circulate through or flow through. If there are dead legs, they must be flushed so that there's minimal chance for bacteria to accumulate in that section.*

---

72.

Which of these devices is used to protect the potable water system?

**Expansion tank**

Ball valve

Check valve

Hammer arrestor

---

*Correct answer: Expansion tank*

*The expansion tank is the device that helps relieve excess pressure when there is a check valve.*

*A check valve is a device, that is normally closed, that prevents the relief of back pressure into the water main. Hammer arrestors absorb the shock caused when the water that flows in a piping system suddenly stops due to fast closing shut-off valves, or by dishwashers and clothes washers. A ball valve is a flow control device.*

---

**73.**

The size of vent piping should be determined by its \_\_\_\_\_ and total number of \_  
\_\_\_\_\_.

**length; fixtures**

length; elbows

fixtures; elbows

fixtures; cleanouts

---

*Correct answer: length, fixtures*

*The vent piping sizing is determined by its total developed length along with the total number of fixtures that are being served off that system.*

---

**74.**

What is the minimum required distance a water closet or bidet can be installed from the center of the flange to any wall or obstruction?

**15 inches**

12 inches

20 inches

18 inches

---

*Correct answer: 15 inches*

*15 inches is the minimum required distance, meaning that it could be installed at 18 or 20 inches, but those are above the minimum required distances and they do not reflect the proper answer to the question. 12 inches would violate the minimum required distance rule because it is less than 15 inches.*

*(Refer to 2021 UPC 402.5)*

---

75.

The space between the flood level of the rim and the tub spout is considered a(n):

**air gap**

air break

indirect waste

cross connection

---

*Correct answer: air gap*

*Any time there is a tap dispensing potable water, the gap in between the flood level rim of the receptor is always considered the air gap. The air break is technically below the flood level of the receptor. This situation does not reflect either a cross connection or indirect waste.*

---

**76.**

What is the maximum temperature that can be discharged from an individual showerhead?

**120 °F**

130 °F

135 °F

115 °F

---

*Correct answer: 120 °F*

*If you have a scenario in which there is water hotter than 120 °F, you need to install a device that limits the temperature, or turn the whole system down to accomplish that setting.*

*(Refer to 2021 UPC 408.3.2)*

---

77.

When reading and studying the code book there is some unique terminology. Which best describes what "may" represents?

Permission

Mandates

Not permitted

Prohibited

---

*Correct answer: Permission*

*Throughout the code, the term "may" is consistently used, and anytime it is used it is important to look at the context. When it is used, it is usually giving permission to do certain things that are outside of the normal code.*

---

**78.**

Any shower compartment, regardless of shape, must have a circle of \_\_\_\_\_ inches.

**30**

12

24

28

---

*Correct answer: 30*

*No matter the shape of the shower compartment, it must have clearance of a circle 30 inches in diameter. This is the minimum and can always be more than 30 inches but never less than that.*

---

**79.**

Which of the following best describes the material that a lead and oakum joint would make up?

**Cast-iron**

PVC

Copper

Steel pipe

---

*Correct answer: Cast-iron*

*Lead and oakum joints are specific to traditional cast-iron and no other material. The oakum is packed into the joint, then hot lead is poured to secure the oakum in the socket. The other items are not acceptable materials to use lead and oakum on.*

---

**80.**

What is the minimum distance that an urinal can be placed next to a wall or partition?

**12 inches**

16 inches

15 inches

10 inches

---

*Correct answer: 12 inches*

*This is the bare minimum standard for the placement of a urinal to any wall or partition. It can be placed more than 12 inches but no less.*

---

**81.**

When installing cast iron, how often should the piping be supported horizontally?

**5 feet**

10 feet

12 feet

3 feet

---

*Correct answer: 5 feet*

*Cast iron piping must be supported every 5 feet horizontally and vertically on each floor. It is not to exceed 15 feet vertically. Any span that is greater than 5 feet is not permitted. If supports are needed more frequently, that will always be acceptable.*

---

**82.**

How many water closets should be present in a library with the capacity for 250 males and 250 females?

**Nine**

Six

Three

Twelve

---

*Correct answer: Nine*

*In a library with the capacity for 250 males and 250 females, you need three water closets for the 250 males and six water closets for the 250 females.*

*(Refer to 2021 UPC Table 422.1, line A-3)*

---

**83.**

What is the minimum slope that a shower pan floor must have?

**1/8 inch**

1/2 inch

3/4 inch

1 inch

---

*Correct answer: 1/8 inch*

*The minimum slope that is required for the shower pan is 1/8 inch. The maximum slope is 1/2 inch. It cannot be any more than that.*

---

84.

What best describes a water closet that does not have a tank and is attached to the wall?

**Wall-hung water closet**

Urinal

Left hand flush water closet

Flushometer

---

*Correct answer: Wall-hung water closet*

*In many commercial applications, you will see wall-hung water closets that do not have a bottom. They are secured through a carrier that is behind the wall for both support and the drainage. The urinal can be wall hung but it is not a water closet. The left-handed flush water closet is going to be a standard floor mount. The flushometer is the device that flushes the water closet whether floor mounted or wall hung.*

---

**85.**

If you have a fixture that is fixed to the wall, what must be done to the joint in between the wall and fixture?

**It must be made watertight between the wall and the fixture.**

Support must be placed below the fixture if applicable.

It must have backing inside the wall to where it is mounted.

It must be set permanently.

---

*Correct answer: It must be made watertight between the wall and the fixture.*

*Although some units that are fixed to the wall have leg supports, there are also those that do not. The other items are nice to have but they don't answer the question in regards to making the fixture watertight.*

---

86.

A \_\_\_\_\_ interceptor is a plumbing receptor that is tied into a sanitary system that receives fats, oil, and grease from wastewater discharges,

grease

sand

oil

water

---

*Correct answer: grease*

*The grease interceptor collects all of the oils and grease in one partition of the interceptor and the fluids pass into the public sewer. These need to be cleaned out quite often, depending on the size of the interceptor and use.*

---

87.

Which of the following materials cannot be secure by compression joints?

PVC

PEX

PEX-AL-PEX

PE-RT

---

*Correct answer: PVC*

*PVC is not permitted to be attached by a compression joint due to the construction of it and its soft shell. The variations of the PEX and polyethylene can be connected through compression but will need a metal insert or stiffener.*

---

**88.**

What is the minimum clearance that a shower door must have when opened?

**22 inches**

20 inches

24 inches

28 inches

---

*Correct answer: 22 inches*

*The minimum required opening must be 22 inches. It can be greater than 22 inches but no less.*

---

**89.**

What best describes a directional-type branch fitting?

**Wye**

Double hub sanitary tee

Tapped tee

Saddle tee

---

*Correct answer: Wye*

*The wye is the only approved directional type fitting that can be used horizontally. The others are not allowed to be installed on a horizontal; they may only be installed on vertical risers.*

---

**90.**

How many feet should the building drain extend from the outside of the building walls?

**2 feet**

3 feet

4 feet

8 feet

---

*Correct answer: 2 feet*

*The building drain must extend 2 feet outside of the building wall, and after 2 feet, it will then convey to the building sewer.*

*The other options are not correct because after 2 feet, it would be considered the building sewer, not the building drain.*

---

**91.**

Which of the following best describes a system that collects natural precipitation that has not been contaminated?

**Rainwater system**

Reclaimed water system

Mulch basin system

Septic system

---

*Correct answer: Rainwater system*

*Rainwater systems can be used to collect and treat water for potable systems. Usually, a storage system is needed to hold and disperse the water as needed.*

---

**92.**

What is the maximum water temperature that can be discharged from a bidet?

**110 °F**

120 °F

115 °F

100 °F

---

*Correct answer: 110 °F*

*When tempering water for a bidet, it must be no more than 110 °F by either a tempering valve or a water heater. The others are either above the maximum or below.*

---

**93.**

Which of the following is best described as, water that is satisfactory for drinking, culinary, and domestic purposes?

**Potable**

Contaminated

Filtered

Soft

---

*Correct answer: Potable*

*Potable is the term that is used when water is safe to consume in any of the ways listed above. Contaminated would be the opposite of potable. Filtered water could still be contaminated, and soft water is a type of water where its chemical structure is altered, not whether it is free of contaminants.*

---

**94.**

A pipe that is provided to help prevent trap siphonage and back pressure is called a:

**vent**

sewer

waste pipe

receptor

---

*Correct answer: vent*

*Not only does the venting provide ventilation to the plumbing system, it also is the key reason trap siphonage does not occur and alleviates any back pressure that can occur in the waste pipe and sewer.*

---

95.

Which of the following best describes a vent that is a continuation of the drain that it connects to?

**Continuous vent**

Wet vent

Stack vent

Air admittance valve

---

*Correct answer: Continuous vent*

*The continuous vent is the vent pipe that continues on through the dwelling after serving as the drain. This allows the system to be protected from siphoning traps and proper drainage.*

*The wet vent is a specific type of waster and vent system that is designed a bit differently. The stack vent also has some slight variations that do not allow it to tie directly into a soil stack. The AAV is designed to be used where a vent physically cannot be taken outside the dwelling due to location.*

---

96.

What is the main function of the temperature and pressure valve on a water heater?

**To release water if the temperature or pressure goes above the limit for that device**

To control the pressure and temperature to the fixtures

To maximize pressure and temperature throughout the dwelling

To be used as a fire protection system

---

*Correct answer: To release water if the temperature or pressure goes above the limit for that device*

*This device is on all types of water heaters. In the event the water heater over heats and or has an elevated pressure, rather than the tank exploding, the pressure will be relieved via this valve. This should be exercised yearly to ensure functionality.*

---

97.

The \_\_\_\_\_ is the access opening in a drainage system to remove obstructions from the system.

cleanout

sewer

backwater valve

septic

---

*Correct answer: cleanout*

*A cleanout is the access opening in a drainage system to remove obstructions from the system. The cleanouts must be accessible, in order to properly clear obstructions that can be in the system. The other answers, although related to the building sewer, do not correlate with access to clear obstructions.*

---

98.

A water supply pipe that is used for public or community use is referred to as a:

**water main**

water meter

water hydrant

water tower

---

*Correct answer: water main*

*This is the distribution pipe that supplies water to cities and or communities as the sole distribution method. Water meters are set on an individual basis. Water hydrants are for the same use as for private use. Water towers are designed to help store water along with help with pressure.*

---

**99.**

What best describes a single building that is designed to be used as a home for the person that owns it?

**Single family dwelling**

Multi-family

Commercial

Manufactured

---

*Correct answer: Single family dwelling*

*The term single family dwelling refers to a building that is used for that person's own residence, detached from any other structure, and separated. This is important to note when reading the code, because there can be different regulations between all four classes.*

---

**100.**

When facing a two-handled temperature control, the one on the left should control the:

**hot water**

cold water

diverter

handheld sprayer

---

*Correct answer: hot water*

*Whenever there is a setup with two handles controlling the hot and cold, the one on the left should always control the hot water. The other devices may be controlled by a separate handle, but it doesn't have to be located on the left-hand side.*

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