

UPC Chapter 3 Student Copy

RV 7.28.20

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Quiz 1

1. Chapter 3 is focused on _____.
 - water system design
 - drainage system design
 - venting
 - general requirements not specific to other chapters
 - all of the answers provided
2. All material and devices used in a plumbing system shall be _____ by a listing agency.
 - listed (third-party certified)
 - labeled (third-party certified)
 - both of the answers provided
 - neither of the answers provided
3. All materials, fixtures, or devices used in or entering into the construction of plumbing and drainage systems shall _____.
 - comply with approved applicable standards
 - conform to green product standards
 - conform to the price of the job
 - confirm to material availability
4. The plumbing material can meet the standard, and be a listed material, and still not meet the code by _____.
 - not being free of defects
 - being manufactured in a foreign country
 - not being contractor approved
 - all of the answers provided
5. A standard is a set of technical definitions and requirements for products that establishes:
 - test methods.
 - specifications.
 - classifications.
 - practices & requirement standards.
 - all of the answers provided
6. Pipe, pipe fittings, traps, fixtures, materials, and devices used in a plumbing system

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- must meet the applicable standard and be _____.
- approved by a contractor
 - accepted by a wholesaler
 - listed by an approved listing agency
 - imported from China
7. Unless otherwise provided for in this code, materials, fixtures, or devices used in or entering into the construction of plumbing systems, or parts thereof, shall be submitted to the _____ for approval.
- contractor
 - owner
 - architect
 - Authority Having Jurisdiction
8. Health Official Building Department, Planning and Safety, and Permit Center may all stand for an Authority Having Jurisdiction.
- True
 - False
9. Each length of pipe and each pipe fitting, trap, fixture, material, and device used in a plumbing system shall have cast, stamped, or indelibly marked on it the _____.
- manufacturer's mark or name
 - location of the manufacturer
 - country of origin
 - insurance carrier
10. If required by the standard that applies, the product shall be marked with the _____ of the product.
- weight and the quality
 - copper content
 - company logo
 - wholesaler I.D.
11. The following devices require the manufacturer's mark or name:
- each length of pipe
 - each pipe fitting
 - each trap
 - each fixture
 - all of the answers provided
12. The following device needs to be marked by the manufacturer:
- full length of pipe
 - 3 feet length of pipe
 - 6 inch nipple created from cutting and threading of an approved pipe
 - all of the answers provided
 - none of the answers provided
13. Field markings are acceptable when _____.
- a device is field constructed
 - the manufacturer's marking becomes obscured
 - a plumber installs a substitute device that is not currently manufactured
 - pigs fly. Field markings are never acceptable
 - additional marking for product repair or substitution is needed
14. Where a standard covers material of various grades, weights, quality, or configurations, the portion of the listed standard that is applicable shall be used.
- True
 - False
15. Plastic pipe, plastic pipe fittings, and components other than those for gas shall comply with _____.
- NSF 14
 - NSF 12
 - ASTM C 1277
 - CISPI 310
16. Per CISPI 301, a four-banded shielded coupling would be used for a _____.
- 1½ inch pipe
 - 12 inch pipe
 - 4 inch pipe
 - 5 inch pipe
17. Cast-iron soil pipe and hubless couplings shall be third party certified in accordance with _____.
- IAMPCO and NSF 14
 - ASTM C1277
 - ASTM F1960 and NZF 1222
 - UPC and UMC
18. Per CISPI 301, a 15-inch pipe would require a _____ banded shielded coupling.
- 2
 - 3
 - 4
 - 5
 - 6
19. Exemptions to the currently adopted plumbing code can be granted if _____.

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- the building exists
- the current plumbing system is to be altered, repaired or renovated
- the exemption is submitted in writing and accepted by the AHJ prior to repairs
- it can be demonstrated that health and safety requirements are observed
- all of the answers provided

Quiz 2

1. Where the alternate material, design or method of construction is not approved, the code official shall _____.
 - respond in writing, stating the reasons why the alternative was not approved
 - meet in person to explain the reasons why the alternative was not approved
 - publish in the state journal of construction records that the alternative was not approved
 - file the Affidavit of Failure with the state attorney general
 - all of the answers provided
2. If the Authority Having Jurisdiction permits an “alternative” engineered design, _____.
 - the approval shall have effect throughout the state
 - the approval shall have no effect beyond the jurisdiction of said AHJ
 - a property owner shall also approve the change
 - no record may be kept to record the exception
3. The provisions of this code allow an alternate material or method of construction provided it is _____.
 - approved by the architect as an alternate
 - accepted by the owner as an alternate
 - approved by the Authority Having Jurisdiction as an alternate
 - manufactured by a reputable organization
4. The Authority Having Jurisdiction shall have the authority to require tests where a _____ is no longer in accordance with the requirements on which its approval was based.
 - toilet
 - faucet
 - fitting
 - all of the answers provided
 - none of the answers provided
5. In a flood hazard area, a breakaway wall is designed to _____.
 - allows free passage of flood waters or high wave surge
 - allows easy entry into a flooded building
 - allows a method of escape from a flooded building
 - allows the demolition crew safe removal of a condemned building
 - all of the answers provided
6. A hose bibb may be installed on a breakaway wall when _____.
 - the water supply is PEX
 - it is 48 inches above ground level
 - it is located on an exterior wall
 - the wall is concrete
 - none of the answers provided
7. A registered design professional submitted an alternative engineered design that was accepted by the AHJ. The building permit shall have _____.
 - the alternative engineered design be part of the permanent record
 - to test results as part of the permanent record
 - the insurance policy number and carrier as part of the permanent record
 - a bond posted for the alternative design
 - all of the answers provided
8. The registered design professional shall provide _____ complete set/s of signed and sealed design documents for the alternative engineered design for submittal to the Authority Having Jurisdiction.
 - one
 - two
 - three
 - four
 - five
9. The AHJ upon reviewing an alternative engineered design may require _____.
 - testing of the design
 - conducting an independent review
 - employing a registered design professional to review
 - the applicant to pay for all costs on an independent review
 - all of the answers provided

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10. IPS is an abbreviation for _____.
• inverted point standard
• iron pipe size
• inside pipe symmetry
• inner porosity sample
11. The abbreviation CTS means _____.
• copper tube size
• certified transverse section
• copper tungsten steel
• cable transmission sequence
• none of the answers provided
12. Sewage or other liquid wastes shall be disposed of into a _____.
• chemical toilet
• sewage retaining tank
• drainage system of the building or premises
• subsurface leaching pit
13. A connection to a public sewer or private sewage disposal system is required for a _____.
• building without plumbing fixtures
• building with plumbing fixtures
• building with emergency drain systems
• building with storm drain systems

Quiz 3

1. It shall be unlawful for a person to deposit _____ into a plumbing fixture, floor drain, interceptor, sump, receptor, or device, which is connected to a drainage system, public sewer, private sewer, septic tank, or cesspool.
• rags
• ashes
• cement
• motor oil
• all of the answers provided
2. Wastes that are detrimental to a public sewer system or sewage treatment plant must be _____.
• treated prior to entering the sewer system
• disposed of as found necessary
• treated as directed by the AHJ
• all of the answers provided
• none of the answers provided
3. Waste from a plumbing system may be discharged into surface waters _____.
• when the waste is rendered safe

- when the waste is discharged into a large waterway or river
 - when the waste discharge has been grandfathered in by prior practice
 - when the waste discharge is less than 10 gpm
 - none of the answers provided
4. No plumbing, drainage, building sewer, or private sewage disposal system shall be located in _____.
• the walls, floors, or underground in any building
• any lot other than the lot that is the site of the building serving the facility
• pipe access spaces accessible for repair
• any garage or equipment room
5. Access requirements of the code shall remain intact when _____.
• the property is subdivided
• the property is sold
• the property ownership is transferred
• all of the answers provided
• none of the answers provided
6. If piping, fixtures, or equipment are located where they interfere with the normal use of windows and doors, then the piping and fixtures shall be _____.
• protected from damage
• identified for restricted use
• relocated to avoid such interference
• approved if accepted by the owner
7. All design, construction, and workmanship shall be in accordance with _____.
• accepted engineering practices
• practices of the contractor
• standard shop practices
• minimizing man hours



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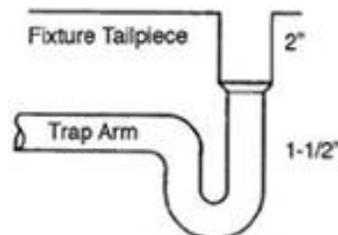
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8. The crack in the pipe as shown in the above picture means that _____.
- it may be repaired with epoxy
 - it may be repaired with liquid solder
 - it may be repaired with tar
 - it may be left as it is if there are no apparent leaks
 - this section of pipe must be replaced
9. Burred ends of pipe and tubing shall be _____.
- avoided by use of special cutting tools
 - confined to exposed and readily accessible locations
 - reamed to the full bore of the pipe or tubing
 - painted to reduce friction
10. Leaving copper tube unreamed can cause _____.
- A. cuts on the plumber's hands
 - B. pin hole leaks
 - C. erosion corrosion
 - D. answers A and B
 - E. answers B and C
11. If you use a brand new tubing cutter with a new sharp wheel, there is no need to ream the copper tubing.
- True
 - False
12. Plumbing systems shall be installed in a manner that is in accordance with _____.
- the UPC
 - applicable standards
 - the manufacturer's installation instructions
 - all of the answers provided
 - none of the answers provided
13. Plumbing piping systems must be installed in conformance with sound limitations _____.
- unless the pipes cannot be insulated
 - as required in the building code
 - if the AHJ specifies it
 - if the building occupants have submitted written complaints
 - only when metal pipes are used

Quiz 4

1. A double hub sanitary tapped tee may be used in a drainage system _____.
- only in the horizontal position
 - for venting only

- if positioned vertically facing upwards
 - none of the answers provided
2. The following may be installed in a plumbing system:
- double hub fitting
 - double tee branch
 - side inlet quarter bend
 - saddle
 - none of the answers provided
3. ABS pipe may be drilled and tapped for the purpose of making connections when the pipe is _____.
- used as an air conditioning condensate
 - a wet vent
 - a dry vent
 - above a water closet
 - none of the answers provided
4. A cast-iron pipe may be threaded when the _____.
- diameter is larger than 2 inches
 - diameter is smaller than 2 inches
 - pipe is used as a dry vent
 - pipe is used as a wet vent
 - none of the answers provided
5. Single-stack drainage and venting systems with unvented branch lines are prohibited.
- True
 - False



6. What is not approved in the above picture?
- Trap too big.
 - Trap arm too big.
 - Trap and trap arm too small.
 - Tailpiece too small.
7. When installing a trap arm into a fitting, _____.
- a listed tube stop shall be used
 - a no-stop tubing adapter may be used
 - the trap arm must be 1½"
 - the trap arm must be 2"
 - none of the answers provided

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8. The above fitting, a _____ is an approved fitting for a toilet closet bend.
- 3"x 4" closet bend
 - 3" x 2" closet bend
 - 6" x 2" closet bend
 - all of the answers provided
 - none of the answers provided
9. The enlargement of a 3 inch closet bend or stub to 4 inches is considered to be an obstruction.
- True
 - False
10. Except for necessary valves, where intermembering or mixing of dissimilar metals occurs, the point of connection shall be confined to _____.
- indoor locations
 - locations under buildings
 - accessible locations
 - above ground locations
11. Valves, pipes, and fittings shall be installed _____.
- in correct relationship to the direction of flow
 - in the direction of the marking on the valve
 - in the direction of the arrow if presented on the valve
 - all of the answers provided
 - none of the answers provided
12. The following valve(s) can be installed in either direction:
- ball valve
 - pressure reducing valve
 - check valve
 - pressure vacuum breaker
13. ABS pipe may be hand tapped and threaded.
- True
 - False
14. A building drain from the front building lot shall extend to the rear building lot when the rear building lot is _____ and if no private

sewer is available or can be constructed to reach the rear building.

- on a corner lot
- an interior lot
- 200 feet from a public sewer
- 300 feet from a public sewer

Quiz 5

1. Piping passing under or through walls must be protected from _____.
- breakage
 - water leaks
 - bending
 - direct sunlight
 - all of the answers provided
2. Piping passing through or under cinders or other corrosive materials shall be _____ in an approved manner.
- sealed
 - protected from external corrosion
 - fire stopped
 - drilled
3. Piping shall have provisions for the _____ of hot water.
- expansion
 - contraction
 - temperature control
 - vibration
 - usage
4. Voids around piping passing through concrete floors on the ground shall be _____.
- flanged
 - protected
 - sealed
 - packed
5. Plumbing pipe may be directly embedded in concrete or masonry _____.
- at no time
 - if the pipe is made of galvanized steel
 - if the pipe is made of black iron
 - if the pipe is Schedule 40 stainless 404 C
6. Holes or notches are allowed in a structural member _____.
- at any place
 - at any size
 - if protected by a nail plate
 - if the member is not seriously weakened or impaired

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- none of the answers provided
7. No notches, cuts or holes are to be made in _____ unless they are specifically considered in the design of the member.
- I-beam joists
 - laminated veneer lumber
 - trusses
 - all of the answers provided
8. A notch is permitted in the center of a floor joist _____.
- if the notch is less than $1/6^{\text{th}}$ the depth of the joist
 - if the notch is less than $1/3^{\text{rd}}$ the depth of the joist
 - if the notch has a nail plate over it
 - is not permitted
9. The maximum diameter of a bored hole in a stud wall is _____ of the stud depth.
- 25%
 - 30%
 - 40%
 - 50%
 - 75%
10. Sewer or drainage pipe that is not approved for use within or under a building shall be 2 feet from a building or less than _____ below the surface of the ground.
- 2 feet
 - 1 foot
 - 3 feet
 - 1.5 feet
11. The best way to prevent internal burrs when cutting a pipe is to use a _____.
- hack saw
 - cutting torch
 - Sawzall
 - tubing cutter followed with a reamer
 - none of the answers provided
12. To avoid erosion due to high water velocities, size the pipe based on Tables found in Chapter _____ of the UPC.
- 2
 - 3
 - 4
 - 5
 - 6
13. The maximum velocity for cold water to prevent erosion is _____ per second.
- 3 feet
 - 5 feet
 - 8 feet
 - 10 feet
 - 12 feet
14. Joints at the roof around pipes, ducts, or other appurtenances shall be made watertight by the use of _____.
- lead
 - copper
 - galvanized iron
 - approved flashings or flashing material
 - all of the answers provided
15. Plastic and copper or copper alloy piping penetrating framing members to within 1 inch of the exposed framing shall be protected by steel nail plates of _____ minimum gauge.
- 18
 - 10
 - 12
 - 14
 - 22
16. The steel nail plate shall extend along the framing member not less than _____ beyond the outside diameter of the pipe or tubing.
- 2 inches
 - 1 inch
 - 2 ½ inches
 - 1 ½ inches
17. Sleeves shall be provided to protect all piping through _____ and _____ walls.
- floor – concrete
 - wood – concrete
 - concrete – masonry
 - none of the answers provided
18. A sleeve is required to protect piping that is installed through a concrete wall that is drilled.
- True
 - False
19. A pipe penetrating an exterior wall must be _____.
- A. sealed
 - B. made water tight
 - C. properly marked
 - D. steel or copper

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- E. answers A and B
20. A pipe sleeve through a firewall shall have the space around the pipe completely sealed with an approved _____ in accordance with other codes.
- fire-resistive material
 - extra thick caulking
 - heat resistant glue
 - heavy duty clay
21. A structural member, such as a floor joist, that has been weakened during a plumbing installation shall be _____ so as to be left in a safe structural condition.
- reinforced
 - repaired
 - replaced
 - all of the answers provided
 - none of the answers provided
22. A rodent proofing screen shall not have an opening greater than _____.
- ¼ inch
 - 3/8 inch
 - ½ inch
 - ¾ inch
 - 1 inch
23. Tub waste openings in framed construction leading to crawl spaces at or below the first floor shall be protected by _____.
- completely covering the opening with plywood collars
 - the installation of approved metal collars or screens
 - a flashing
 - filling the annular space with approved fiber material

Quiz 6

1. All piping, fixtures, and equipment shall be adequately supported in accordance with _____, the manufacturer's installation instructions, and in accordance with the Authority Having Jurisdiction.
- a contractor's code
 - this code
 - the owner's instructions
 - the interior designer's instructions
2. _____ and _____ shall be of sufficient strength to support the weight of a pipe and its contents.

- Hangers – anchors
 - Nails – brackets
 - Sleeves – shells
 - Studs – supports
 - none of the answers provided
3. A dielectric union isolates incompatible piping materials.
- True
 - False
4. Piping that is joined by lead & oakum shall have horizontal supports every _____.
- 4 feet
 - 5 feet
 - 6 feet
 - 8 feet
 - 10 feet
5. Piping that is joined by a compression gasket shall have horizontal supports every _____.
- 4 feet
 - 5 feet
 - 6 feet
 - 8 feet
 - 10 feet
6. Piping that is joined by a shielded coupling shall have horizontal supports every _____.
- 4 feet
 - 5 feet
 - 6 feet
 - 8 feet
 - 10 feet
7. Horizontal pipe shall be braced at not more than 40 foot intervals to prevent _____.
- noise
 - leaking
 - vertical movement
 - horizontal movement
8. Supports for horizontal piping must not exceed _____ from the adjacent joint.
- 6 inches
 - 12 inches
 - 18 inches
 - 24 inches
 - 36 inches
9. Cast-iron pipe, installed vertically, shall be supported at its base and at _____.

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- each floor, not to exceed 15 feet
 - every other story
 - 5 foot intervals
 - 10 foot intervals
10. Copper piping installed vertically shall be supported at each floor or at intervals not to exceed _____.
- 4 feet
 - 10 feet
 - 12 feet
 - 15 feet
11. A ¾ inch copper pipe installed horizontally shall be supported at intervals not to exceed _____.
- 10 feet
 - 4 feet
 - 6 feet
 - 3 feet
12. A 2 inch copper pipe installed horizontally shall be supported at intervals not exceeding _____.
- 4 feet
 - 6 feet
 - 10 feet
 - 12 feet
13. Threaded or welded ¾ inch steel pipe supplying water installed horizontally shall be supported at intervals not exceeding _____.
- 5 feet
 - 10 feet
 - 12 feet
 - 15 feet
14. Threaded or welded 2 inch steel pipe supplying water installed horizontally shall be supported at intervals not exceeding _____.
- 5 feet
 - 10 feet
 - 12 feet
 - 15 feet
15. Threaded or welded ½ inch steel pipe supplying gas installed horizontally shall be supported at intervals not exceeding _____.
- 6 feet
 - 10 feet
 - 5 feet

- 12 feet
16. ABS DWV installed horizontally shall be supported every _____ regardless of diameter.
- 4 feet
 - 6 feet
 - 10 feet
 - 12 feet
17. A 1 inch PEX piping installed horizontally shall be supported at intervals not to exceed _____.
- 24 inches
 - 32 inches
 - 36 inches
 - 98 inches
18. The type of acceptable joints for PEX-AL-PEX shall be _____.
- metal insert and metal compression
 - solvent cemented
 - shielded coupling
 - mechanical

Quiz 7

1. Piping in the ground shall be laid on _____ for its entire length.
- a firm bed
 - concrete blocks
 - redwood stakes
 - a bed of rocks

**TABLE 313.6
HANGER ROD SIZES**

PIPE AND TUBE SIZE (inches)	ROD SIZE (inches)
½ – 4	¾
5 – 8	½
10 – 12	⅝

For SI units: 1 inch = 25.4 mm

2. When supporting a horizontal 5-inch diameter pipe, a _____ size rod shall be used.
- 3/8 inch
 - 1/2 inch
 - 5/8 inch
 - all of the answers provided
 - none of the answers provided
3. When supporting a horizontal pipe, 3/4-inches in diameter, a _____ size rod shall be used.
- 3/8 inch

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- 1/2 inch
 - 5/8 inch
 - 1/4 inch
4. A horizontal 1¼ inch diameter gas pipe shall be supported every _____.
- 4 feet
 - 6 feet
 - 10 feet
 - 12 feet
5. All trenches deeper than the footing of a building or structure, paralleling the same, shall be at least _____ from the bottom exterior edge of the footing, or as approved.
- 45 degrees
 - 90 degrees
 - 4 feet
 - 12 feet
6. Where pipes are driven, the drive pipe shall be not less than _____ size(s) larger than the pipe to be laid.
- 1/2
 - 1
 - 2
 - 3
7. Excavations required to be made for the installation of a building drainage system or part thereof, within the walls of a building, shall be _____.
- dug down at least 6 inches
 - made using a cast-iron drain pipe
 - open trench work
 - made using ABS, PVC or DWV pipe
8. Trenches shall be kept open until they are inspected, tested and _____.
- cleaned
 - approved by a plumber
 - accepted by the AHJ
 - shown to the owner
9. Excavations shall be completely backfilled as soon after inspection as practicable.
- True
 - False
10. Mechanical devices such as bulldozers, graders, etc., shall complete backfilling to grade where covering above the pipe is at least _____ high.
- 6 inches

- 4 inches
 - 5 inches
 - 12 inches
11. Thermoplastic piping shall be bedded in not less than _____ of granular fill supporting the pipe.
- 6 inches
 - 4 inches
 - 12 inches
 - 10 inches
12. Thermoplastic piping shall have at least _____ of granular fill above the pipe.
- 6 inches
 - 4 inches
 - 12 inches
 - 10 inches

Quiz 8

1. Unions shall be permitted to be used in drainage piping _____.
- where accessible
 - where located in the trap seal
 - between a fixture and its trap
 - all of the answers provided
2. In the vent system, a union is allowed if it's aboveground.
- True
 - False
3. Unions are allowed in wet vents.
- True
 - False
4. Unions are allowed in water systems.
- True
 - False
5. Galvanized steel street fittings can be used as drainage fittings.
- True
 - False
6. Cast-iron body cleanouts can only be used as _____.
- drain plugs
 - reducing fittings
 - cleanout plugs
 - door stops

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7. Soil or drain pipe subject to condensation over food storage in food-handling establishments shall be _____.
 - installed with a spill pan
 - thermally insulated
 - rerouted out of the area
 - tested with 5 psi
 8. Soil or drain pipe located over food storage in food-handling establishments shall _____.
 - have the least possible number of joints
 - be installed so as to connect to the nearest adequately sized vertical stack
 - have cleanouts extended through the floor construction above
 - all of the answers provided
 - none of the answers provided
 9. A pressure test of 10 psi is conducted. The increments on the gauge shall be _____.
 - 0.1 psi
 - 0.2 psi
 - 0.5 psi
 - 1.0 psi
 - 2.0 psi
 10. A pressure test of 100 psi is conducted. The increments on the gauge shall be _____.
 - 1 psi
 - 2 psi
 - 5 psi
 - 10 psi
 - 20 psi
 11. Test gauges shall have a pressure range not exceeding _____ the test pressure applied.
 - 15 psi of
 - 10 psi of
 - 5 psi of
 - twice
 12. When installing _____, the Authority Having Jurisdiction shall require evidence of the competency of the installers.
 - potable water piping
 - fuel-gas piping
 - medical gas piping
 - all of the answers provided
 13. Where pressure piping systems are rehabilitated using an epoxy lining system, it shall be in accordance with _____.
 - UPC
- ASTM F2831
 - CISPI
 - NSF 14