

**The following test is Continuing Education for:**

**Master Plumbers, Journeyman Plumbers, UDC Plumbing Inspectors,  
and Commercial Plumbing Inspectors.**

**You can complete the test by printing a hard copy, or you can take it online. All answers are found in the Wisconsin Uniform Plumbing Code Book (Comm. 81 and 82). If you do not own a Plumbing codebook, you may follow this link to the State of Wisconsin website and download it to your computer. <http://commerce.wi.gov/SB/SBDivCodesListing.tml>.**

**The answer sheet can be found at the end of the test. Take the following steps to complete the testing process:**

- 1. Print the answer sheet and circle the correct answer.**
- 2. Complete and Mail the:**
  - a) Answer sheet**
  - b) Educational Course Attendance Verification Form  
(found after the answer sheet)**
  - c) Correct fees.**

**There is no reason to mail the whole test.**

**Remember: All questions have been extracted from the codebook. Therefore, the one correct answer will be as worded in the codes.**

**Begin test on the following page...**

## Plumbing Continuing Education Test 14

### **Comm 81.01: Definitions**

1. \_\_\_\_\_ means an individual or agency recognized by the department to act on the department's behalf relative to a specific activity or function.
  - a. Manager
  - b. Agent
  - c. Inspector
  - d. Representative
  
2. \_\_\_\_\_ means a pressure vessel fixture designed to use steam under pressure for sterilizing.
  - a. Sterilizer, pressure
  - b. Autoclave
  - c. Sterilizer, pressure instrument washer
  - d. Both a and b
  
3. \_\_\_\_\_ means a health care facility that accepts federal funding in accordance with 42 CFR 416 of the federal register for health care finance and where 4 or more individuals that undergo a surgical procedure for which federal reimbursement is based.
  - a. Medical center
  - b. Outpatient surgery center
  - c. Non-ambulatory surgery center
  - d. Ambulatory surgery center
  
4. \_\_\_\_\_ means a unit for the treatment of wastewater which utilizes molecular oxygen in the absence of free oxygen for biological respiration and decomposition.
  - a. Aerobic treatment component
  - b. Anaerobic treatment component
  - c. Standard treatment component
  - d. None of the above
  
5. \_\_\_\_\_ means a pipe, other than a pipe located inside a building, that carries any of the following: storm water, groundwater or clear water.
  - a. Storm sewer
  - b. Surface water system
  - c. Dry wells
  - d. Street gutters

6. \_\_\_\_\_ means a feature formed in the soil matrix by the processes of reduction, translocation and oxidation of iron and manganese compounds in seasonally saturated soil.

- a. Nodules
- b. Redoximorphic feature
- c. Masses
- d. Pore linings

7. \_\_\_\_\_ means a membrane or material installed beneath a fixture to prevent leakage from escaping to the floor, ceiling or walls.

- a. Safing
- b. Basaltic rock
- c. Mineral wool
- d. Curtain wall system

8. \_\_\_\_\_ means a fitting or device supplied with water or other fluid under positive pressure which passes through an integral orifice or constriction causing a vacuum.

- a. Venturi effect
- b. Injector
- c. Aspirator
- d. Vacuum pump

9. \_\_\_\_\_ means the unwanted reverse flow of liquids, solids or gases.

- a. Backflow
- b. Downstream pressure
- c. Upstream pressure
- d. Cross-connection

10. \_\_\_\_\_ means a type of cross connection control device which is composed of 2 independently acting check valves internally force-loaded to a normally closed position, tightly closing shut-off valves located at each end of the assembly and fitted with test cocks.

- a. Double check backflow prevention assembly
- b. Backflow preventer, double check valve type
- c. DCV
- d. All of the above

11. \_\_\_\_\_ means a type of a double check backflow prevention assembly which includes a parallel flow meter to indicate leakage or unauthorized use of water downstream of the assembly.

- a. DC detector
- b. Double check detector assembly backflow preventer
- c. Double check detector valve type backflow preventer
- d. All of the above

12. \_\_\_\_\_ means a pressure greater than the supply pressure that may cause backflow.

- a. Backflow
- b. Ballcock
- c. Back siphonage
- d. Back pressure

13. \_\_\_\_\_ means a pressure greater than atmospheric and exerted for a period of more than 12 continuous hours.

- a. Absolute pressure
- b. Fixed pressure
- c. Continuous pressure
- d. High pressure

14. \_\_\_\_\_ means a receptacle designed to intercept and retain sand, grit, earth and other similar solids.

- a. Grease interceptor
- b. Sand interceptor
- c. Oil interceptor
- d. Mud interceptor

15. \_\_\_\_\_ means a piping arrangement for a drain system where the wastes from a fixture, appliance, appurtenance or device discharge by means of indirect or local waste piping terminating in a receptor at a point below the flood level rim of the receptor and above the inlet of the trap serving the receptor.

- a. Air-gap
- b. Jake break
- c. Air-break
- d. Air-gap, water supply system

16. \_\_\_\_\_ means the creation of a backflow as a result of negative pressure.

- a. Back siphonage backflow vacuum breaker
- b. Back siphonage
- c. Backwater valve
- d. Back pressure

17. \_\_\_\_\_ means horizontal piping within or under a building, installed below the lowest fixture or the lowest floor level from which fixtures can drain by gravity to the building sewer.

- a. Building drain
- b. Building drain, sanitary
- c. Building drain, storm
- d. Building drain branch

18. \_\_\_\_\_ means a substance, activity or condition that is known to have the potential to cause acute or chronic illness or death if exposure to the substance, activity or condition is not abated.

- a. High risk behavior
- b. Communicable disease
- c. Dangerous activities
- d. Human health hazard

19. \_\_\_\_\_ means that part of the drain system not within or under a building which conveys its discharge to a public sewer, private interceptor main sewer, private onsite wastewater treatment system or other point of discharge or dispersal.

- a. Building sewer, sanitary
- b. Building sewer
- c. Building sewer, storm
- d. Building subdrain

20. \_\_\_\_\_ means a type of cross connection control device which contains a check valve force-loaded closed and an air inlet vent valve force-loaded open to atmosphere, positioned downstream of the check valve, and located between and including 2 tightly closing shut-off valves and 2 test cocks.

- a. Back siphonage backflow vacuum breaker
- b. Back siphonage
- c. Backwater valve
- d. Back pressure

21. \_\_\_\_\_ means a water closet, lavatory and a bathtub or shower located together on the same floor level.

- a. Full bathroom
- b. Bathroom group
- c. Three-quarter bath
- d. None of the above

22. \_\_\_\_\_ means that portion of a drain system that consists of a series of pipes that transport water from one area to another without providing detention.

- a. Corporation cock
- b. Cross connection control assembly
- c. Conveyance system
- d. Cross connection

23. \_\_\_\_\_ means a pipe or channel outside a building which conveys storm water from the roof or gutter drains to a storm drain, storm sewer or to grade.

- a. Leader
- b. Adequate channel
- c. Control measure
- d. Major outfall

24. \_\_\_\_\_ means a color classification that specifies the relative degrees of the color variables in terms of hue, value and chroma.

- a. Mottling
- b. Ground surface color
- c. Redoximorphic feature
- d. Munsell soil color

25. \_\_\_\_\_ means the portion of a pipe that is enlarged to receive the end of another pipe of the same diameter for the purpose of making a joint.

- a. Bell
- b. Drip pan elbow
- c. Suction diffuser
- d. Connector

26. \_\_\_\_\_ means a type of plumbing system from which valid and reliable data are being sought to demonstrate compliance with the intent of chs. Comm 82 to 84.

- a. Failing private onsite wastewater treatment system
- b. Private sewage system
- c. Experimental system
- d. None of the above

27. \_\_\_\_\_ means a type of sewage pump which macerates wastewater consisting in part of sewage.

- a. Sewage pump
- b. Sewage grinder pump
- c. Effluent pump
- d. Sump pump

28. \_\_\_\_\_ means any industrial or commercial organization or enterprise operated for profit, including but not limited to a proprietorship, partnership, firm, business trust, joint venture, syndicate, corporation or association.

- a. Business services
- b. Organizational structure
- c. Business establishment
- d. Institutional structure

29. \_\_\_\_\_ means a type of stationary holding tank used to collect and hold wastewater discharges generated by an individual camping trailer or recreational vehicle.

- a. Campsite receptor
- b. Catch basin
- c. Camping unit transfer container
- d. None of the above

30. \_\_\_\_\_ means the accumulated floating solids generated during the biological, physical or chemical treatment, coagulation or sedimentation of wastewater.

- a. Sludge
- b. Slime
- c. Scum
- d. Sewage

31. Sewage means wastewater containing fecal coliform bacteria exceeding 200 CFU, colony forming units, per 100 ml.

- a. True
- b. False

32. \_\_\_\_\_ means a drain pipe serving as a receptor for the discharge wastes from indirect or local waste piping.

- a. Stack
- b. Spring line pipe
- c. Spigot
- d. Standpipe

33. \_\_\_\_\_ means the unobstructed vertical distance through the free atmosphere between the outlet of indirect or local waste piping and the flood level rim of the receptor into which it discharges.

- a. Air-gap
- b. Air-break
- c. Air-gap, drain system
- d. Air-gap, water supply system

34. \_\_\_\_\_ means an excavation which receives domestic wastewater by means of a drain system without pretreatment of the wastewater and retains the organic matter and solids permitting the liquids to seep from the excavation.

- a. Cesspool
- b. Cistern
- c. Refuse
- d. Holding tank

35. \_\_\_\_\_ means a method of venting 2 to 8 traps or trapped fixtures without providing an individual vent for each trap or fixture.

- a. Circuit vent
- b. Auto vent
- c. Individual vent
- d. Stack vent

36. \_\_\_\_\_ means a device supplied with hot or cold water, or both, and located adjacent to a water closet or clinical sink to be used for cleansing bedpans.

- a. Exposed wall hung unit
- b. Mixing valve
- c. Vacuum breaker
- d. Bedpan washer hose

37. Bedrock means rock that is exposed at the earth's surface or underlies soil material and includes:

- a. Weathered in-place consolidated material, larger than 2 mm in size and greater than 50% by volume
- b. Weakly consolidated sandstone at the point of increased resistance to penetration of a knife blade.
- c. Both a and b
- d. Neither a or b

38. \_\_\_\_\_ means an accessible opening in a drain system used for the removal of obstructions.

- a. Cleanout plug
- b. Plumbing auger
- c. Drain pipe
- d. Cleanout

39. \_\_\_\_\_ means solids in wastewater that can be removed readily by standard filtering procedures in a laboratory and reported as milligrams per liter (mg/L).

- a. Water quality measurement
- b. Conventional pollutant
- c. Total dissolved solids
- d. Total suspended solids

40. \_\_\_\_\_ means a fitting, device or arrangement of piping so designed and constructed as to provide, when properly vented, a liquid seal which prevents emission of sewer gases without materially affecting the flow of wastewater through it.

- a. Trap seal
- b. Trap seal primer
- c. Trap weir
- d. Trap



41. \_\_\_\_\_ means wastewater other than storm water, having no impurities or where impurities are below a minimum concentration considered harmful by the department, including but not limited to noncontact cooling water and condensate drainage from refrigeration compressors and air conditioning equipment, drainage of water used for equipment chilling purposes and cooled condensate from steam heating systems or other equipment.

- a. Blackwater
- b. Graywater
- c. Drainage water
- d. Clear water

42. \_\_\_\_\_ means a fixture combining one sink and laundry tray or a 2- or 3-compartment sink or laundry tray in one unit.

- a. Combination fixture
- b. Combination drain and vent system
- c. Combination private water main
- d. Combination water service

43. Lead-free means a chemical composition equal to or less than 0.3% of lead.

- a. True
- b. False

44. \_\_\_\_\_ means a portion of drain piping which receives the wastes discharged from indirect waste piping and which discharges those wastes by means of an air break or air gap into a receptor.

- a. Local waste piping
- b. Local vent
- c. Multipurpose piping system
- d. None of the above

45. \_\_\_\_\_ means a branch vent connecting at or downstream from the junction of 2 fixture drains and serving as a vent for those fixture drains.

- a. Common vent
- b. Circuit vent
- c. Auto vent
- d. Stack vent

46. \_\_\_\_\_ means a test performed on a plumbing system or portion thereof in which the system is filled with a liquid, normally water, and raised to a designated pressure.

- a. Hydrostatic test
- b. Test pressure
- c. Water jacket test
- d. Water pressure test

47. \_\_\_\_\_ means drain piping which does not connect directly with the drain system, but which discharges into the drain system by means of an air break or air gap into a receptor.
- a. Individual vent
  - b. Indirect waste piping
  - c. Infiltration component
  - d. Infiltrative surface
48. \_\_\_\_\_ means a drain pipe inside the building which conveys storm water from a roof to the storm drain or storm sewer.
- a. Containment
  - b. Conductor
  - c. Contaminant load
  - d. Common vent
49. \_\_\_\_\_ means a tank or pit that receives wastewater that must be emptied by mechanical means.
- a. Basement waterproofing system
  - b. Sump
  - c. Water table
  - d. Water tank
50. \_\_\_\_\_ means a valve placed in a water service or a private water main, usually near the lot line.
- a. Dead end
  - b. Stop and drain ball valve
  - c. Meter valve
  - d. Curb stop
51. \_\_\_\_\_ means a dimensional volume of in situ soil that receives wastewater for treatment or distributes final effluent for dispersal.
- a. Distribution cell
  - b. Dispersal zone
  - c. Documented data
  - d. Domestic wastewater
52. \_\_\_\_\_ means a layer of soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, or biologic characteristics.
- a. Soil consistence
  - b. Soil morphology
  - c. Soil horizon
  - d. Soil profile

53. \_\_\_\_\_ means the end of a pipe which fits into a bell or hub.

- a. Valve
- b. Mixer tap
- c. Faucet
- d. Spigot

54. \_\_\_\_\_ means any pipe that carries wastewater or water-borne wastes.

- a. Drain system
- b. Exam sink
- c. Treatment sink
- d. Drain

55. \_\_\_\_\_ means liquid discharged from a process, device, appurtenance or piping system.

- a. Ejector
- b. Effluent
- c. Elevation
- d. Engineered soil

56. \_\_\_\_\_ means a specification, standard, guideline or procedure in the field of plumbing or related thereto, generally recognized and accepted as authoritative documented through national standards or specifications.

- a. Approved standards
- b. Quality assurance standards
- c. Accepted engineering practice
- d. None of the above

57. \_\_\_\_\_ (when applied to a fixture, appliance, pipe, fitting, valve or equipment) means having access for maintenance, but which first may require the removal of an access panel or similar obstruction.

- a. Accessible
- b. Readily accessible
- c. Open
- d. Available

58. \_\_\_\_\_ means wastewater contaminated by waste materials, exclusive of urine, feces or industrial waste, deposited into plumbing drain systems.

- a. Groundwater
- b. Graywater
- c. Clearwater
- d. Blackwater

59. \_\_\_\_\_ means a unit for the treatment of wastewater that utilizes the principle of oxidation for biological decomposition.

- a. Standard treatment component
- b. Anaerobic treatment component
- c. Residential wastewater system
- d. Aerobic treatment component

60. \_\_\_\_\_ means a receptacle designed to intercept and retain or remove grease or fatty substances.

- a. Grease recovery device
- b. Grease interceptor
- c. Grease shield
- d. Grease guzzler

61. \_\_\_\_\_ means a plumbing appliance, the function of which is unique to health care activities.

- a. Hand held shower
- b. Assisted living bath fixtures
- c. Health care plumbing appliance
- d. Healthcare accessible

62. \_\_\_\_\_ means a device designed to prevent the reverse flow of wastewater in a drain system.

- a. Access box
- b. Diverter valve
- c. Backwater valve
- d. Access sleeve

63. \_\_\_\_\_ means a water supply valve opened or closed by means of a float or similar device used to supply water to a tank.

- a. Ballcock
- b. Float
- c. Lever
- d. Liftarm

64. \_\_\_\_\_ means zones of soil saturation which include perched water tables, shallow regional groundwater tables or aquifers, or zones that are seasonally, periodically or permanently saturated.

- a. High hazard
- b. High groundwater elevation
- c. Low groundwater
- d. High groundwater

65. \_\_\_\_\_ means a manufactured device or prefabricated assembly of component parts which is an adjunct to a plumbing product or plumbing system.

- a. Accessory
- b. Appurtenance
- c. Fabricated
- d. Assembled

66. \_\_\_\_\_ means a receptor designed to collect storm waters from an open area.

- a. Floor drain
- b. Area drain
- c. Trench drain
- d. Grease interceptor

67. \_\_\_\_\_ means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank or plumbing fixture and the flood level rim or spill level of the receptacle.

- a. Air-gap, water supply system
- b. Air-gap
- c. Air-gap, drain system
- d. Air-break

68. \_\_\_\_\_ means a watertight receptacle for the collection and holding of wastewater.

- a. Holding tank
- b. Horizontal pipe
- c. Hose connection backflow preventer
- d. Hose connection vacuum breaker

69. Hot water means water at a temperature of 110 °F or more.

- a. True
- b. False

70. \_\_\_\_\_ means soil naturally formed or deposited in its present location or position and includes soil material that has been plowed using normal tillage implements and depositional material resulting from erosion or flooding.

- a. In situ soil
- b. Ex situ soil
- c. Soil mechanics
- d. Shrink-swell capacity

71. \_\_\_\_\_ means a part of a piping system other than a riser, main or stack.

- a. Fitting
- b. Valve
- c. Pipe cap
- d. Branch

72. \_\_\_\_\_ means the vertical distance along a drain stack measured from immediately below a branch drain connection to immediately below the first lower branch drain connection that is 8 feet or more below.

- a. Branch tailpiece
- b. Branch vent
- c. B. T. U
- d. Branch interval

73. \_\_\_\_\_ means a device designed and installed so as to separate and retain deleterious, hazardous or undesirable matter from wastes flowing through it.

- a. Interceptor
- b. Separator
- c. Neither a or b
- d. Both a and b

74. \_\_\_\_\_ means a combination relief valve designed to function as both a temperature relief and pressure relief valve.

- a. Temperature and pressure relief valve
- b. Low pressure valve
- c. Vacuum valve
- d. Temperature relief valve

75. \_\_\_\_\_ water means water ranging in temperature from 85 °F. to less than 110 °F.

- a. Hot
- b. Alkaline
- c. Tempered
- d. Tap

76. \_\_\_\_\_ means a product designed to support soil and create a cavity for the temporary storage of effluent and to provide an infiltrative surface for the distribution cell POWTS dispersal or treatment component.

- a. Septic tank
- b. Leaching chamber
- c. Drainfield
- d. Gravelless system

77. \_\_\_\_\_ means a device designed to intercept and retain oil, lubricating grease or other similar materials.

- a. Grease recovery device
- b. Grease trap
- c. Oil interceptor
- d. Grease guzzler

78. Design wastewater flow means 100% of the estimated wastewater flow generated by a dwelling, building or facility.

- a. True
- b. False

79. \_\_\_\_\_ means a type of POWTS treatment component, excluding a soil-based POWTS treatment component, that utilizes a chemical or photoelectric process to reduce the wastewater fecal coliform contaminant load.

- a. Ozonation
- b. Chlorination
- c. Disinfection unit
- d. Artificial UV radiation

80. \_\_\_\_\_ means the point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

- a. Ordinary high-water mark
- b. Hydrophytic
- c. Public trust domain
- d. Floodplain

**Comm 82.01: Scope.**

81. The provisions of this chapter apply \_\_\_\_\_ to the design, construction, installation, supervision, maintenance and inspection of plumbing, including but not limited to sanitary and storm drainage, water supplies, wastewater treatment, and dispersal or discharge for buildings, except for POWTS systems as regulated by ch. Comm 83.

- a. Specifically
- b. Exclusively
- c. Entirely
- d. Uniformly

**Comm 82.015: Purpose.**

82. Pursuant to s. 145.02, Stats., the purpose of this chapter is to provide that all plumbing in connection with buildings and facilities in the state, including buildings owned by the state or any political subdivision thereof, shall be safe, sanitary and such as to safeguard the public health and the \_\_\_\_\_ .

- a. Community
- b. Waters of the state
- c. Environment
- d. Infrastructure

83. Pursuant to s. 145.13, Stats., this chapter is uniform in application and a municipality may not enact an ordinance for the design, construction, installation, supervision, maintenance and inspection of plumbing which is more \_\_\_\_\_ than this chapter, except as specifically permitted by rule.

- a. Lenient
- b. Stringent
- c. Rigorous
- d. Thorough

**Comm 82.10: Basic plumbing principles.**

84. This chapter is founded upon basic principles of environmental \_\_\_\_\_ and safety through properly designed, installed and maintained plumbing systems.

- a. Sanitation
- b. Health
- c. Practices
- d. Standards

85. Some of the \_\_\_\_\_ of plumbing construction may vary, but the basic sanitary and safety principles desirable and necessary to protect the health of people are the same.

- a. Information
- b. Practices
- c. Details
- d. Standards

86. Plumbing in connection with all buildings, public and private, intended for human occupancy, shall be installed and maintained in such a manner so as to protect the \_\_\_\_\_ of the public or occupants and the waters of the state.

- a. Health
- b. Safety
- c. Welfare
- d. All of the above



87. Plumbing fixtures, appliances and appurtenances, whether existing or to be installed, shall be supplied with water in \_\_\_\_\_ volume and at pressures adequate to enable the fixtures, appliances and appurtenances to function properly and efficiently at all times and without undue noise under normal conditions of use.

- a. Sufficient
- b. Adequate
- c. Appropriate
- d. Satisfactory

88. Plumbing systems shall be designed and adjusted to use the \_\_\_\_\_ quantity of water consistent with proper performance and cleaning.

- a. Maximum
- b. Minimum
- c. Sufficient
- d. Approved

89. Devices for heating and storing water in pressure vessels or tanks shall be so designed and installed as to \_\_\_\_\_ dangers of explosion or overheating.

- a. Avoid
- b. Circumvent
- c. Avert
- d. Prevent

90. Drain systems shall be designed, constructed and maintained so as to conduct the wastewater or sewage \_\_\_\_\_ and shall have adequate cleanouts.

- a. Efficiently
- b. Effectively
- c. Appropriately
- d. Sufficiently

91. The drain systems shall be so designed as to provide an adequate circulation of air in all pipes and no \_\_\_\_\_ of siphonage, aspiration or forcing of trap seals under conditions of ordinary use.

- a. Danger
- b. Chance
- c. Threat
- d. Risk

92. A plumbing system shall be of durable material, free from defective workmanship, and designed and constructed so as to provide \_\_\_\_\_ service for its reasonable expected life.

- a. Acceptable
- b. Satisfactory
- c. Reasonable
- d. Adequate

93. Proper \_\_\_\_\_ shall be provided to prevent contamination of food, water, sterile goods and similar materials by backflow of wastewater.

- a. Prevention
- b. Means
- c. Measures
- d. Protection

94. All plumbing fixtures shall be installed so as to provide adequate spacing and accessibility for the intended use and \_\_\_\_\_.

- a. Cleaning
- b. Safety
- c. Function
- d. Capabilities

95. Every building intended for \_\_\_\_\_ shall be provided with an adequate, safe and potable water supply.

- a. Shelter
- b. Human occupancy
- c. Habitat
- d. None of the above

96. To fulfill the basic needs of sanitation and personal hygiene, each dwelling connected to a POWTS or public sewer shall be provided with at least the following plumbing fixtures:

- a. one water closet
- b. one wash basin and one kitchen sink
- c. one bathtub
- d. All of the above

97. Hot or tempered water shall be supplied to all plumbing fixtures that \_\_\_\_\_ require hot or tempered water for proper use and function.

- a. Usually
- b. Normally
- c. Generally
- d. Commonly

98. Where plumbing fixtures exist in a building that is connected to a public sewer system, suitable provision shall be made for treating, recycling, dispersing or holding the wastewater.

- a. True
- b. False

99. Plumbing fixtures shall be made of \_\_\_\_\_, smooth, non-absorbent and corrosion resistant material, and shall be free from concealed fouling surfaces.

- a. Impervious
- b. Approved
- c. Durable
- d. Seamless

**Comm 82.20: Plan review and cross connection**

100. When review is required, regardless of where the installation is to be located, written approval for the plans shall be obtained \_\_\_\_\_ installation of the work.

- a. Immediately after
- b. At the time of
- c. Prior to
- d. After

101. AGENT MUNICIPALITIES. The department may \_\_\_\_\_ to an approved municipality the authority to review and approve plumbing plans and specifications for those plumbing installations to be located within the municipality's boundary limits and which require approval under sub. (1) (b).

- a. Assign
- b. Delegate
- c. Entrust
- d. Designate

102. An agent municipality shall employ at least 2 \_\_\_\_\_ plumbing inspectors who have been qualified by the department.

- a. Full time
- b. Part-time
- c. Licensed
- d. Certified

103. The primary duties of the plumbing inspectors shall include plumbing \_\_\_\_\_.

- a. System review
- b. Distribution system review
- c. Plan review
- d. Disposal review

104. The plumbing inspectors shall be \_\_\_\_\_ licensed master or journeyman plumbers.

- a. Regionally
- b. Nationally
- c. State
- d. Wisconsin

105. An agent municipality may \_\_\_\_\_ its jurisdiction for plan review and approval for any project, in which case plans shall be submitted to the department for review and approval.

- a. Waive
- b. Enforce
- c. Surrender
- d. Implement

106. Agent municipalities may set by ordinance the fees for plan review services.

- a. True
- b. False

107. PRIORITY PLAN REVIEW. An appointment may be made with the department to facilitate the examination of plans in less than the normal processing time.

- a. True
- b. False

108. PLANS AND SPECIFICATIONS. At least \_\_\_\_\_ set (s) of plans and one copy of specifications which are clear, legible and permanent copies shall be submitted for examination and approval.

- a. 3
- b. 1
- c. 2
- d. 4

109. All plans submitted for approval shall be accompanied by sufficient data and information for the department to \_\_\_\_\_ if the installation and its performance will meet the requirements of chs. Comm 81 to 84.

- a. Determine
- b. Conclude
- c. Evaluate
- d. Assess

110. Information to accompany the plans shall include:

- a. The location or address of the installation
- b. The name of the owner
- c. The name of the contractor
- d. a and b

111. Plans proposing the installation, creation or extension of a private sanitary building sewer or a sanitary private interceptor main sewer which is to discharge to a municipal treatment facility shall not be approved, if the municipality is ineligible for sanitary sewer extension approvals under s. NR 110.05.

- a. True
- b. False

112. Plans proposing the installation of a building sewer for new construction which is to discharge to a municipal treatment facility shall not be required to comply with subd. 3., if:

- a. The proposed installation is served by an existing building sewer which extends from the lot line to the public sewer and the proposed installation does not exceed the capacity of the existing building sewer or sewers.
- b. The plans indicate that a drainage load of not more than 54 drainage fixture units will be discharged through the building sewer.
- c. a OR b
- d. a and b

113. When requesting approval of an experimental plumbing system, which of the following shall be submitted:

- a. At least 2 sets of plans signed in accordance with par. (d) and detailing the system installation for each site.
- b. A letter of consent from the site or system owner of the installation. The letter shall acknowledge that the owner has received and read a copy of the experimental plumbing system submittal and is in agreement with all requirements listed within this subdivision.
- c. Any additional information as requested by the department.
- d. All of the above

114. No later than five years after the date of the completed installation the department may perform one of the following:

- a. Order the removal of the experimental plumbing system.
- b. Issue an alternate approval as specified in sub. (12) (a).
- c. Provide an extension of the experiment with conditions.
- d. All of the above

115. The department may revoke any approval, issued under the provisions of this chapter, for any false statements or misrepresentation of facts on which the approval was based.

- a. True
- b. False

116. Plan approval by the department or its authorized representative shall expire \_\_\_\_\_ year(s) after the date indicated on the approval letter, if construction has not commenced within that \_\_\_\_\_ year period.

- a. one half
- b. one
- c. two
- d. three

117. Except for priority petitions, the department shall review and make a determination on a petition for variance within \_\_\_\_\_ business days of receipt of all calculations, documents and fees required to complete the review.

- a. 30
- b. 7
- c. 10
- d. 14

### **Comm 82.21 Testing and maintenance**

118. Except as provided in par. (a), all new plumbing and all parts of existing systems which have been altered, extended or repaired shall be \_\_\_\_\_ as specified in par. (d) to disclose leaks and defects before the plumbing is put into operation.

- a. Tested
- b. Reviewed
- c. Evaluated
- d. Appraised

119. The testing of the plumbing shall not be required where the installation does not include the addition, replacement, alteration or relocation of any water distribution, drain or vent piping.

- a. True
- b. False

120. Where the plumbing is installed in a municipality having a \_\_\_\_\_, the testing of the plumbing shall be done in the presence of a plumbing inspector, except as provided in subd. 1.

- a. Home inspector
- b. Construction inspector
- c. Local inspector
- d. Public works inspector

121. The plumber shall have present the proper \_\_\_\_\_ for making the tests, and shall furnish such assistance as may be necessary in making the inspection.

- a. Apparatus
- b. Appliances
- c. Tools
- d. a and b

122. A \_\_\_\_\_ inspection shall be made when the plumbing system is roughed-in and before fixtures are set.

- a. Rough-in
- b. First rough
- c. Second rough
- d. Final

123. Except as provided in subd. 1., plumbing work shall not be closed in, concealed, or covered until it has been \_\_\_\_\_ by the plumbing inspector and permission is granted to do so.

- a. Inspected
- b. Approved
- c. Evaluated
- d. a and b

124. Upon completion of the plumbing installation and before \_\_\_\_\_ approval is given, the plumbing inspector shall inspect the work.

- a. Final
- b. Initial
- c. Early
- d. Pre-

125. Whenever the plumbing official finds that the work or installation does not pass any initial test or inspection, the \_\_\_\_\_ corrections shall be made to comply with this chapter.

- a. Necessary
- b. Full
- c. Completed
- d. Identified

126. The work or installation shall then be \_\_\_\_\_ for inspection to the plumbing inspector.

- a. Reviewed
- b. Resubmitted
- c. Evaluated
- d. Reconsidered

127. The building sewer or private interceptor main sewer shall be tested by insertion of a test plug at the point of connection with the \_\_\_\_\_ sewer.

- a. Public
- b. Sanitary
- c. Stormwater
- d. Dedicated

128. The air test shall be made by attaching an air compressor testing apparatus to any \_\_\_\_\_ opening, and, after closing all other inlets and outlets to the system, forcing air into the system until there is a uniform gauge pressure of 3 pounds per square inch.

- a. Appropriate
- b. Approved
- c. Suitable
- d. Correct

129. The entire building drain with all its branches, receptacles and connections shall be brought so far as practical to the surface or grade of the basement floor and shall be tested with \_\_\_\_\_ in accordance with subd. 7.

- a. Water
- b. Air
- c. Water or air
- d. None of the above

130. The piping of a water distribution system shall be tested and proved water tight under a water pressure \_\_\_\_\_ the working pressure under which it is to be used.

- a. Equal to
- b. Matching
- c. Not more than
- d. Not less than

121. A test for \_\_\_\_\_ shall be applied to the entire drain and vent system at one time or to the entire system in sections after the rough piping has been installed in accordance with either subd. 7. a. or b.

- a. Waterflow
- b. Static pressure
- c. Residual pressure
- d. Watertightness



132. If applied to the entire system, all openings in the piping shall be tightly closed, except the \_\_\_\_\_ opening, and the system shall be filled with water to the point of overflow.

- a. Highest
- b. Lowest
- c. Main
- d. Top

133. If the system is tested in sections, each opening shall be tightly plugged \_\_\_\_\_ the highest opening of the section under test, and each section shall be filled with water, but a section shall not be tested with less than a 10 foot head of water.

- a. Including
- b. Excluding
- c. Except
- d. Counting

134. In testing successive sections, at least the upper \_\_\_\_\_ feet of the next preceding section shall be tested, so that no joint or pipe in the building, except the uppermost \_\_\_\_\_ feet of the system, is subjected to a test of less than a \_\_\_\_\_ foot head of water.

- a. 5
- b. 10
- c. 12
- d. 15

135. Where \_\_\_\_\_ by the local plumbing inspector, after the plumbing fixtures have been installed and the traps filled with water, the connections shall be tested and proved gas and watertight by either one of the methods specified in subd. 8. a. or b.

- a. Required
- b. Recommended
- c. Assessed
- d. Suggested

136. The smoke test shall be made by introducing a \_\_\_\_\_, thick smoke, produced by one or more smoke machines, into the completed system.

- a. Strong
- b. Substantial
- c. Pungent
- d. Putrid

137. When the smoke appears at stack openings on the roof, the openings shall be closed and a pressure equivalent to a (n) \_\_\_\_\_ inch water column shall be built and maintained for the period of the inspection.

- a. One
- b. Two
- c. Three
- d. Six

138. When a hazard to \_\_\_\_\_ exists or is created by an existing system, that system shall be repaired or replaced.

- a. Life
- b. Health
- c. Property
- d. All of the above

139. When an old or defective fixture is removed, to be replaced by a new fixture, and no other fixture or piping is to be added or remodeled, it is necessary to reconstruct the drain or vent piping to make it conform to the provisions of this chapter, unless the drain or vent piping is in a defective condition.

- a. True
- b. False

140. Where the existing drain or vent piping does not conform to the provisions of this chapter, the department may require the new fixtures to be provided with \_\_\_\_\_ traps.

- a. Full
- b. Drum
- c. Non-siphoning
- d. Deep Seal

141. When old or defective plumbing is to \_\_\_\_\_, the remodeled system shall be made to conform to this chapter.

- a. Be remodeled
- b. Have additional fixtures installed
- c. Have the whole plumbing system moved to another part of the building
- d. a, b, or c

142. Except as provided in subd. 2., plumbing materials removed and found to be in \_\_\_\_\_ condition, may be reused if such reuse is approved by the department or a local plumbing inspector.

- a. Excellent
- b. Good
- c. Fair
- d. Satisfactory

143. The owner of the building or facility in which the reused materials are to be installed shall provide \_\_\_\_\_ consent.

- a. Verbal
- b. Written
- c. Informed
- d. Legal

144. Water supply piping materials may only be \_\_\_\_\_ when intended for uses having an equal or higher degree of hazard than the previous use as specified in Table 82.70-1.

- a. Used
- b. Reused
- c. Salvaged
- d. Recycled

145. Existing building sewers and drains may be used in connection with \_\_\_\_\_ buildings only when they are found on examination and test to conform to the requirements of this chapter governing building sewers and drains.

- a. Commercial
- b. New
- c. Industrial
- d. Vacant

146. If the existing work is found \_\_\_\_\_ the local or state inspector shall notify the owner of the changes necessary to make it conform to the requirements of this chapter.

- a. Deficient
- b. Incomplete
- c. Defective
- d. To be substandard

147. All repairs to fixtures or piping shall be done in conformance with the provisions of this chapter, except repair clamps or bands may be used for \_\_\_\_\_ situations.

- a. Emergency
- b. Approved
- c. Unusual
- d. Atypical

148. When a structure is \_\_\_\_\_, all sanitary sewer, storm sewer and water supply connections shall be sealed and plugged in a safe manner.

- a. Demolished
- b. Removed
- c. a or b
- d. Preserved

149. If a dead end is created in the removal of any part of a drain system, all openings in the drain system shall be properly \_\_\_\_\_ .

- a. Sealed
- b. Installed
- c. Cleaned
- d. Fitted

150. A performance test shall be conducted for the devices listed in Table 82.21-1 at all of the following intervals EXCEPT:

- a. Before the time of installation.
- b. Immediately after repairs to the device have occurred
- c. Immediately after alterations to the device have occurred.
- d. At least annually.

151. As specified in Table 82.21-1, the results of the cross connection device performance test shall be submitted to the department and purveyor within \_\_\_\_\_ days of completion of the test.

- a. 14
- b. 20
- c. 60
- d. 30

152. The results of performance tests for the devices or assemblies listed in Table 82.21-1 shall be made available upon \_\_\_\_\_ to the department, its agent, or the local governmental unit.

- a. Submission
- b. Request
- c. Notification
- d. Application

153. The maintenance and performance testing requirements of this subsection shall also apply to those cross connection control devices or assemblies installed prior to the \_\_\_\_\_ date of this subsection.

- a. Effective
- b. Due
- c. Approved
- d. Reference

**Comm 82.30: Sanitary drain systems**

154. The provisions of this section set forth the requirements for the design and installation of sanitary drain systems, including building drains and \_\_\_\_\_ sewers.

- a. Building
- b. Storm
- c. Water
- d. Public

155. Drainage fixture unit values for intermittent flow fixtures not listed in Table 82.30-1 shall be computed on the basis of one fixture unit equaling \_\_\_\_\_ gallons per minute of flow.

- a. 6
- b. 7.5
- c. 6.5
- d. 7

156. Drainage fixture unit values for \_\_\_\_\_ flow devices such as pumps, ejectors, air conditioning equipment or similar devices shall be computed on the basis of one fixture unit for each 2 gallons per minute of flow rate of discharge into the drain system.

- a. Continuous
- b. Semicontinuous
- c. a or b
- d. None of the above

157. The drainage fixture unit values assigned to a receptor which is to receive only the indirect waste discharge from a relief valve on a domestic water heater may be disregarded when determining the \_\_\_\_\_ size of the building drain and building sewer.

- a. Suitable
- b. Correct
- c. Maximum
- d. Minimum

158. The minimum size of a gravity flow sanitary building sewer shall be \_\_\_\_\_ inches in diameter.

- a. 2
- b. 4
- c. 6
- d. 5

159. A municipality or sanitary district by ordinance may not require that portion of the building sewer between the lot line and the public sewer to be larger than 4 inches in diameter.

- a. True
- b. False

160. Sewers pressurized through the use of \_\_\_\_\_ shall be sized to maintain a minimum flow velocity of 2 feet per second and shall be in accordance with the ejector or pump manufacturer's recommendations.

- a. Sewage ejectors
- b. Sewage pumps
- c. Sewage grinder pumps
- d. All of the above

161. Except as provided in subd. 3., the minimum size of pressurized private interceptor main sewer shall be such so as to maintain a minimum flow velocity of \_\_\_\_\_ feet per second.

- a. 3
- b. 2
- c. 3.5
- d. 2.5

162. Where provisions are made for the future installation of fixtures, the \_\_\_\_\_ of such fixtures shall be considered in determining the required sizes of drain and vent pipes.

- a. Drainage fixture unit values
- b. Water supply fixture unit values
- c. Drainage fixture unit loads
- d. Expected loads

163. Construction to provide for \_\_\_\_\_ installations shall be terminated with a plugged fitting or fittings.

- a. Future
- b. Emergency
- c. Permanent
- d. Institutional

164. All changes in direction of flow in drain piping shall be made by the appropriate use of \_\_\_\_\_.

- a. 45 degree wyes
- b. Long or short sweep quarter bends
- c. Sixth, eighth, or sixteenth bends
- d. Combination of the above or other equivalent fittings

165. Where blowout type fixtures are installed \_\_\_\_\_, appropriate fittings shall be installed to prevent the passage of wastes from one fixture to the other.

- a. Remotely
- b. Closely
- c. Concurrently
- d. Back to back

166. Drain fittings, connections, devices and methods of installation shall not obstruct or retard the flow of \_\_\_\_\_ in the drain system or venting system in an amount greater than the normal frictional resistance to flow, unless as otherwise permitted in this chapter or unless approved by the department.

- a. Water and air
- b. Wastes and sewage
- c. a and b
- d. Gas

167. All sanitary building \_\_\_\_\_ shall discharge into an approved, vented sump with an airtight cover.

- a. Venting system
- b. Drainage system
- c. a and b
- d. Subdrains

168. The sump shall be so located as to receive the sewage by gravity flow, and shall be located at least \_\_\_\_\_ feet from any water well.

- a. 6
- b. 10
- c. 20
- d. 25

169. The water supply fixture unit method shall be used to determine peak input flow in gallons per minute; \_\_\_\_\_ the fixtures that drain to the sump shall be included.

- a. Only
- b. All
- c. None of
- d. Primarily

170. When converting water fixture units to gallons per minute it is \_\_\_\_\_ to calculate the load as a supply system with predominantly flush tanks.

- a. Not permissible
- b. Permissible
- c. Sufficient
- d. Useful

171. The capacity of the sump shall be such that the pump when actuated by the lowest “pump on” switch runs at least \_\_\_\_\_ seconds.

- a. 20
- b. 30
- c. 45
- d. 60

172. Between the highest “pump on” switch level and the sump inlet, the sump shall hold the amount of input that exceeds the discharge of the pumping equipment in a 5 minute peak input period, but in no case shall the vertical distance between the switch and the inlet be less than \_\_\_\_\_ inches.

- a. 3
- b. 2
- c. 4
- d. 2.5

173. The \_\_\_\_\_ level shall be maintained in accordance with the pump manufacturer’s requirements, but shall not be less than 4 inches above the sump bottom.

- a. High water
- b. Low water
- c. Permissible
- d. Approved

174. Penetrations through the top of removable sump covers shall be limited to those for the \_\_\_\_\_ for the pump or pumps.

- a. Electrical supply
- b. Vent piping
- c. Discharge piping
- d. All of the above

175. Where required. The liquid from all sanitary building sumps shall be lifted and discharged into the building sanitary drain system by \_\_\_\_\_.

- a. Automatic ejectors
- b. Pumps
- c. Other equally efficient method approved by the department.
- d. All of the above

176. Duplex ejector or pumping equipment shall be installed in a public building where discharge into a sump.

- a. 3 or more water closets
- b. More than 10 drainage fixture units
- c. More than 20 drainage fixture units
- d. a or c

177. Where duplex pumping equipment is installed, a(n) \_\_\_\_\_ alarm system with a manual control reset shall be installed to indicate pump failure.

- a. Audible
- b. Visual
- c. a and b
- d. a or b



178. The size and design of an ejector or pump shall be determined by the \_\_\_\_\_.

- a. Capacity of the sump to be served
- b. The discharge head
- c. Discharge frequency
- d. All of the above

179. The \_\_\_\_\_ pipe from the ejector or pump shall be connected to the gravity drain by means of a wye pattern fitting.

- a. Discharge
- b. Supply
- c. Main
- d. Primary

180. With the exception of \_\_\_\_\_ sumps, a full flow check valve shall be installed in the discharge piping from each ejector or pump.

- a. Exterior
- b. Contained
- c. Uncontained
- d. Turbine

# Plumbing Continuing Education Test 14

## Answer Sheet

Circle or mark the correct answer

- |     |         |     |         |      |         |      |         |
|-----|---------|-----|---------|------|---------|------|---------|
| 1.  | a b c d | 49. | a b c d | 97.  | a b c d | 145. | a b c d |
| 2.  | a b c d | 50. | a b c d | 98.  | a b c d | 146. | a b c d |
| 3.  | a b c d | 51. | a b c d | 99.  | a b c d | 147. | a b c d |
| 4.  | a b c d | 52. | a b c d | 100. | a b c d | 148. | a b c d |
| 5.  | a b c d | 53. | a b c d | 101. | a b c d | 149. | a b c d |
| 6.  | a b c d | 54. | a b c d | 102. | a b c d | 150. | a b c d |
| 7.  | a b c d | 55. | a b c d | 103. | a b c d | 151. | a b c d |
| 8.  | a b c d | 56. | a b c d | 104. | a b c d | 152. | a b c d |
| 9.  | a b c d | 57. | a b c d | 105. | a b c d | 153. | a b c d |
| 10. | a b c d | 58. | a b c d | 106. | a b c d | 154. | a b c d |
| 11. | a b c d | 59. | a b c d | 107. | a b c d | 155. | a b c d |
| 12. | a b c d | 60. | a b c d | 108. | a b c d | 156. | a b c d |
| 13. | a b c d | 61. | a b c d | 109. | a b c d | 157. | a b c d |
| 14. | a b c d | 62. | a b c d | 110. | a b c d | 158. | a b c d |
| 15. | a b c d | 63. | a b c d | 111. | a b c d | 159. | a b c d |
| 16. | a b c d | 64. | a b c d | 112. | a b c d | 160. | a b c d |
| 17. | a b c d | 65. | a b c d | 113. | a b c d | 161. | a b c d |
| 18. | a b c d | 66. | a b c d | 114. | a b c d | 162. | a b c d |
| 19. | a b c d | 67. | a b c d | 115. | a b c d | 163. | a b c d |
| 20. | a b c d | 68. | a b c d | 116. | a b c d | 164. | a b c d |
| 21. | a b c d | 69. | a b c d | 117. | a b c d | 165. | a b c d |
| 22. | a b c d | 70. | a b c d | 118. | a b c d | 166. | a b c d |
| 23. | a b c d | 71. | a b c d | 119. | a b c d | 167. | a b c d |
| 24. | a b c d | 72. | a b c d | 120. | a b c d | 168. | a b c d |
| 25. | a b c d | 73. | a b c d | 121. | a b c d | 169. | a b c d |
| 26. | a b c d | 74. | a b c d | 122. | a b c d | 170. | a b c d |
| 27. | a b c d | 75. | a b c d | 123. | a b c d | 171. | a b c d |
| 28. | a b c d | 76. | a b c d | 124. | a b c d | 172. | a b c d |
| 29. | a b c d | 77. | a b c d | 125. | a b c d | 173. | a b c d |
| 30. | a b c d | 78. | a b c d | 126. | a b c d | 174. | a b c d |
| 31. | a b c d | 79. | a b c d | 127. | a b c d | 175. | a b c d |
| 32. | a b c d | 80. | a b c d | 128. | a b c d | 176. | a b c d |
| 33. | a b c d | 81. | a b c d | 129. | a b c d | 177. | a b c d |
| 34. | a b c d | 82. | a b c d | 130. | a b c d | 178. | a b c d |
| 35. | a b c d | 83. | a b c d | 131. | a b c d | 179. | a b c d |
| 36. | a b c d | 84. | a b c d | 132. | a b c d | 180. | a b c d |
| 37. | a b c d | 85. | a b c d | 133. | a b c d |      |         |
| 38. | a b c d | 86. | a b c d | 134. | a b c d |      |         |
| 39. | a b c d | 87. | a b c d | 135. | a b c d |      |         |
| 40. | a b c d | 88. | a b c d | 136. | a b c d |      |         |
| 41. | a b c d | 89. | a b c d | 137. | a b c d |      |         |
| 42. | a b c d | 90. | a b c d | 138. | a b c d |      |         |
| 43. | a b c d | 91. | a b c d | 139. | a b c d |      |         |
| 44. | a b c d | 92. | a b c d | 140. | a b c d |      |         |
| 45. | a b c d | 93. | a b c d | 141. | a b c d |      |         |
| 46. | a b c d | 94. | a b c d | 142. | a b c d |      |         |
| 47. | a b c d | 95. | a b c d | 143. | a b c d |      |         |
| 48. | a b c d | 96. | a b c d | 144. | a b c d |      |         |

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Name and Credential Number

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Date

To obtain your WI continuing education credits follow the below instructions.

1. If taking the same quiz more than once per cycle, fill out the forms with different dates.
2. Fill in all fields applicable.
3. Include your credential or license number.
4. We take care of registering with the state and mailing back the test results.

**FYI: The state allows a person to take the same course more than once (several times) per cycle.**

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1. Test answer sheets, fee, and the following form.
2. Fill out this form below completely.
3. Make check or Money Order to Brett Or Kathy Ward
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Credential Number \_\_\_\_\_  
Phone# \_\_\_\_\_  
Fax# \_\_\_\_\_

Course Title and Name Plumbing Continuing Education Test 14  
Credited Hours 6 hrs  
List the name of each credential held by attendee \_\_\_\_\_  
\_\_\_\_\_

Email address \_\_\_\_\_

-----  
To be completed by Brett or Kathy Ward      yourwicontinuinged.com

Course Password \_\_\_\_\_ Course ID# 10159

Attendee passed the correspondence quiz with greater than 70% score \_\_\_\_\_  
Date

Instructor Signature \_\_\_\_\_