

Applicant Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Employer Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
Home Phone #: \_\_\_\_\_  
Work Phone #: \_\_\_\_\_

## **CROSS CONNECTION CONTROL TEST JUNEAU, ALASKA**

### **Part 1** True or False (circle the correct answer)

- T F 1. Juneau's Cross Connection Control program is administered by the CBJ Building Division, and inspections must verify that all points of use within buildings are protected against cross connection hazards.
- T F 2. Watts 9-Ds or equal can be used for all boilers that do not have glycol or other additives.
- T F 3. Testable backflow prevention devices in Juneau must be tested immediately after installation and yearly thereafter.
- T F 4. Building permits are required for installation and removal of testable backflow prevention devices.
- T F 5. If Watts 9-D or equal is installed at the service entrance of a residential building, the inside plumbing can remain unprotected against cross connections.
- T F 6. Reduced pressure principle backflow preventers (R-Ps) must be installed only in horizontal position, unless approved otherwise by CBJ inspector.
- T F 7. Approved double check valve assemblies (DCVAs) are required on all wet sprinkler systems without additives and on dry sprinkler systems.
- T F 8. Existing buildings connecting to City water must be protected from cross connections before City water turn-on.
- T F 9. If a toxic substance is used to inhibit corrosion in a boiler system, a reduced pressure principle backflow prevention device must be installed on the make-up water line to the boiler.
- T F 10. The term atmospheric vacuum breaker refers to a device containing two check valves and a relief valve discharging to the atmosphere.
- T F 11. An approved air-gap shall be at least double the diameter of the supply pipe, but in no case less than one (1) inch above the top rim of the receiving vessel.

- T F 12. The property owners are responsible for having their devices maintained in good working order and for having them tested.
- T F 13. Backpressure and backsiphonage are the two main forces contributing to the reverse flow of water in pipelines.
- T F 14. A steady discharge of water from the relief valve of a reduced pressure principle backflow prevention device could indicate either a defect in the first check or in the relief valve or both; or backflow occurring through a leaking second valve.
- T F 15. Both shut-off valves must be closed in order to properly test a reduced pressure principle backflow preventer.
- T F 16. The number one check valve of a reduced pressure principle backflow prevention device must be tested to verify that it is tight against reversed flow under all pressure differentials.
- T F 17. A submerged inlet cross-connection is one where the potable water supply line enters an open vessel at a point below the overflow rim of the vessel.
- T F 18. Water purveyors are authorized to shut off water service to premises where water is used in a hazardous manner when the owner refuses to install or regularly test an appropriate backflow prevention device.
- T F 19. Reduced pressure principle backflow prevention devices differ from double check valve assemblies by having a heavier spring in the number two check and having a relief valve.
- T F 20. The spring tension on the number one check determines the difference of pressure in the zone of reduced pressure.
- T F 21. Certified testers are responsible for filling out test reports only if the device has passed.
- T F 22. All approved testable devices require resilient seat shutoff valves. Only the shut off valves that come as part of the complete backflow prevention device assembly can be approved by CBJ inspectors.
- T F 23. If a building permit allowing plumbing work is already in force for a structure, a separate building permit for a testable backflow prevention device is also required.
- T F 24. Installation of a backflow prevention device must be in a readily accessible location and where no part of the device may be submerged and/or subject to freezing.

**Part 2** Multiple Choice (circle the letter of correct answer)

24. The best place to install a backflow prevention device is
- A. In a pit, provided it has a cover.
  - B. Underground.
  - C. In an accessible protected location above flood level.
  - D. At or near the ceiling in the basement.
25. When must testers submit copies of device test reports to the Building Division?
- A. Within 120 days of when testable device is installed.
  - B. When the Building Division issues notification that a testable device is due for its yearly test.
  - C. When a device is repaired or relocated.
  - D. All of the above.
26. For a boiler, a 9-D or equal or an R-P is to be installed where?
- A. Before the pressure reducing valve.
  - B. After the pressure reducing valve.
27. Existing buildings already on a water system have \_\_\_\_\_ days for installation of high and low hazard backflow preventers, and \_\_\_\_\_ for sprinkler systems.
- A. 60 / ½ year
  - B. 120 / 1 year
  - C. 70 / 1 ½ years
28. The current editions of what two manuals (in addition to the Uniform Plumbing Code) did Juneau's Cross Connection Control program adopt?
- A. FCCCHR (The Foundation) Manual and IAPMO Manual.
  - B. FCCCHR (The Foundation) Manual and AWWA (yellow book) Manual.
  - C. AWWA (yellow book) Manual and the IAPMO Manual.
29. Testable devices are acceptable for installation when on which approved list?
- A. FCCCHR (The Foundation)
  - B. AWWA
  - C. IAPMO

30. Whenever the devices are found to be defective, they shall be repaired, overhauled or replaced at the expense of the owner. A passing test report shall be submitted to the building department within \_\_\_ days from the time the device failed to pass.
- A. 30
  - B. 60
  - C. 120
31. DCVAs \_\_\_\_\_ and smaller may be installed in the vertical position without prior approval of the Building Division.
- A. 4"
  - B. 6"
  - C. 8"
32. Which of the following conditions would be the greater factor in water contamination through cross-connections?
- A. A vacuum produced by water hammer.
  - B. Turning off the water supply to a single-story residence.
  - C. Turning off the water supply to a multi-story building and allowing the upper story's water supply to drain to the lower floors.
  - D. None of the above.
33. What determines the type of backflow protection device that should be installed?
- A. The degree of hazard.
  - B. The volume of water used by the consumer.
  - C. The number of cross-connections found.
  - D. Depends on whether siphonage or backpressures are involved.
34. Why is it highly recommended that approved reduced pressure principle backflow prevention devices be installed a certain distance above grade level?
- A. To prevent the relief port of the device from ever becoming submerged.
  - B. To provide for the required reduced pressure zone.
  - C. To facilitate installation of the long assembly in a short section of the water line.
  - D. To avoid the construction cost of a below ground vault.

35. Why must the relief port of a reduced pressure principle backflow prevention device never be plugged or extended?
- A. So that the device will function as designed.
  - B. The plug may interfere with the inspection and testing.
  - C. Plugging the opening or extending the drain above the opening is permitted but only when leakage from the port becomes a problem.
  - D. To prevent excessive pressure build-up in the consumer's service line.
36. Toilet tank ballcock assemblies must have their critical level vacuum breaker at least \_\_\_\_\_ above the tank overflow level.
- A.  $\frac{1}{2}$ "
  - B. 1"
  - C. 2"
37. Juneau's cross connection control ordinance requires what type of backflow preventer for a dry sprinkler system?
- A. Reduced pressure principle device (R-P).
  - B. Single check valve.
  - C. Double check valve assembly (DCVA).
38. Vacuum breakers for frost free hose bibbs must be \_\_\_\_\_
- A. Testable
  - B. Drainable
39. Which two types of backflow protection are approved for high hazards to the potable water supply?
- A. Atmospheric vacuum breaker and air gap.
  - B. DCVA and R-P.
  - C. R-P and air gap.
40. Durable tags must be affixed to a backflow prevention device each time the device is tested, and must include:
- A. Date tested with pass / fail
  - B. Tester's name and certification #
  - C. Size, model and serial # of the device
  - D. All of the above