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38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

California - Nevada Section American Water Works Association

PW8VT73G

CA-NV AWWA BPAT New Candidate General

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for California - Nevada Section American Water Works Association PW8VT73G, each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, PW8VT73G
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

SINGLE CHOICE

What is the primary purpose of an air gap in a water distribution system?

- ☐ A To provide a visual indication of system pressure changes
- ☒ B To prevent backsiphonage and backpressure backflow into the potable water supply
- ☐ C To reduce turbulence in the customer service line
- ☐ D To allow for the testing of backflow preventers without service interruption

ANSWER B

WHY An air gap is the physical separation between the free-flowing discharge end of a potable supply line and the receiving vessel or container. It is considered the most effective means of preventing both backsiphonage and backpressure backflow from contaminating the public water system, which is why it is often required by cross-connection control programs.

QUESTION 2

SINGLE CHOICE

In water distribution terminology, what is the meaning of the abbreviation 'DI' when referring to pipe material?

- ☒ A Ductile Iron
- ☐ B Drainage Inlet
- ☐ C Direct Insert
- ☐ D Dual Irrigation

ANSWER A

WHY 'DI' is the standard industry abbreviation for Ductile Iron, which is one of the most common materials used for water main pipe in North American distribution systems. The other options are not recognized abbreviations for pipe material in waterworks terminology.

QUESTION 3

SINGLE CHOICE

When performing a main shutdown and draining the pipeline, what is the FIRST action an operator should take before operating any valves?

- ☐ A Open nearby fire hydrants to confirm flow direction
- ☒ B Notify the supervisor and coordinate with all affected customers
- ☐ C Verify that the repair clamps and tools are on site
- ☐ D Check the SCADA system for telemetry confirmation

ANSWER B

WHY Standard distribution operating procedure requires that operators notify supervision, dispatch, and affected customers before initiating a main shutdown. Even though valve location, tool check, and SCADA verification are important preparatory steps, the established and widely tested protocol is to communicate with the supervisor and customers first so that impacts (outages, fires, water quality complaints) can be coordinated.

QUESTION 4

SINGLE CHOICE

What is the minimum disinfectant residual (free chlorine) that a public water system is generally required to maintain throughout the distribution system under the federal Surface Water Treatment Rules?

- ☒ A 0.2 mg/L
- ☐ B 0.5 mg/L
- ☐ C 1.0 mg/L
- ☐ D 2.0 mg/L

ANSWER A

WHY The federal Surface Water Treatment Rule and Stage 1/Stage 2 Disinfectants and Disinfection Byproducts Rules require that a detectable free chlorine residual be maintained throughout the distribution system. The minimum level that water systems must maintain as measurable residual is 0.2 mg/L, which is the standard answer in operator certification exams for the minimum required residual.

QUESTION 5

SINGLE CHOICE

What color is the bonnet of a fire hydrant that indicates a pressure rating in the 1500 psi and greater (Class AA) range, under NFPA 291 conventions?

- ☐ A Red
- ☐ B Green
- ☐ C Blue
- ☒ D Yellow

ANSWER D

WHY NFPA 291 classifies hydrants by their rated pressure. Class AA hydrants (rated 1500 psi or greater) are identified by a yellow bonnet, Class A (1000–1499 psi) by a green bonnet, Class B (500–999 psi) by an orange bonnet, and lower-class hydrants by a red bonnet. Operators preparing for certification exams frequently need to recognize these color codes.

QUESTION 6

SINGLE CHOICE

If a tank holds 250,000 gallons and the water level drops by 3 feet in 24 hours with no pumping (only customer demand), what is the approximate average flow rate out of the tank in gallons per minute (gpm)?

- ☐ A 8.4 gpm
- ☒ B 12.6 gpm
- ☐ C 52 gpm
- ☐ D 209 gpm

ANSWER B

WHY Average demand = 250,000 gallons / (24 × 60 minutes) = 250,000 / 1,440 = 12.6 gpm. The 3-foot drop information is additional context describing tank geometry and does not need to be used in this calculation of average flow rate. Operator math problems focus on conversions such as days to minutes and gallons to gpm.

QUESTION 7

SINGLE CHOICE

Which of the following best describes why a newly installed or repaired water main must be flushed, sampled, and disinfected before being placed back in service?

- ☐ A To reduce operating costs from unaccounted-for water
- ☐ B To verify that all valves close properly under pressure
- ☒ C To remove contamination and verify microbiological safety before customers use the water
- ☐ D To calibrate the customer meters affected by the work

ANSWER C

WHY Disinfection, flushing, and bacteriological sampling of new or repaired mains are required to prevent contamination of the distribution system and to verify that the water is safe for human consumption. AWWA standards such as C651 (Disinfecting Water Mains) prescribe these procedures, and they are a standard topic on operator certification exams.

QUESTION 8

SINGLE CHOICE

An irrigation system using chemical fertilizer injection is typically required to be protected by which type of backflow preventer?

- ☐ A Double check valve assembly (DCVA)
- ☐ B Pressure vacuum breaker (PVB)
- ☒ C Reduced pressure principal backflow preventer (RP)
- ☐ D Atmospheric vacuum breaker (AVB)

ANSWER C

WHY An irrigation system with chemical injection (fertilizer, herbicide, etc.) is considered a high-health hazard cross-connection and is typically required to be protected by a Reduced Pressure Principal Backflow Preventer (RP), because it protects against both backsiphonage and backpressure. A DCVA, PVB, or AVB is not acceptable for this high-hazard application because chemicals could be drawn or pushed back into the potable supply.

QUESTION 9

MULTIPLE CHOICE

Which of the following are generally acceptable routine activities for a water distribution operator to perform during normal system maintenance? (Choose two.)

- ☒ **A** Operating mainline valves to isolate a section of main for repair
- ☐ **B** Performing open-heart surgery on a customer experiencing chest pain at a job site
- ☒ **C** Flushing hydrants as part of a unidirectional flushing program
- ☐ **D** Auditing the homeowner's personal financial records on property

ANSWER A • C

WHY Operating mainline valves to isolate a section of main for repair (A) and flushing hydrants as part of a unidirectional flushing program (C) are standard, recognized water distribution operator responsibilities. Performing medical procedures (B) and auditing personal financial records (D) are clearly outside the operator's scope of practice and authority.