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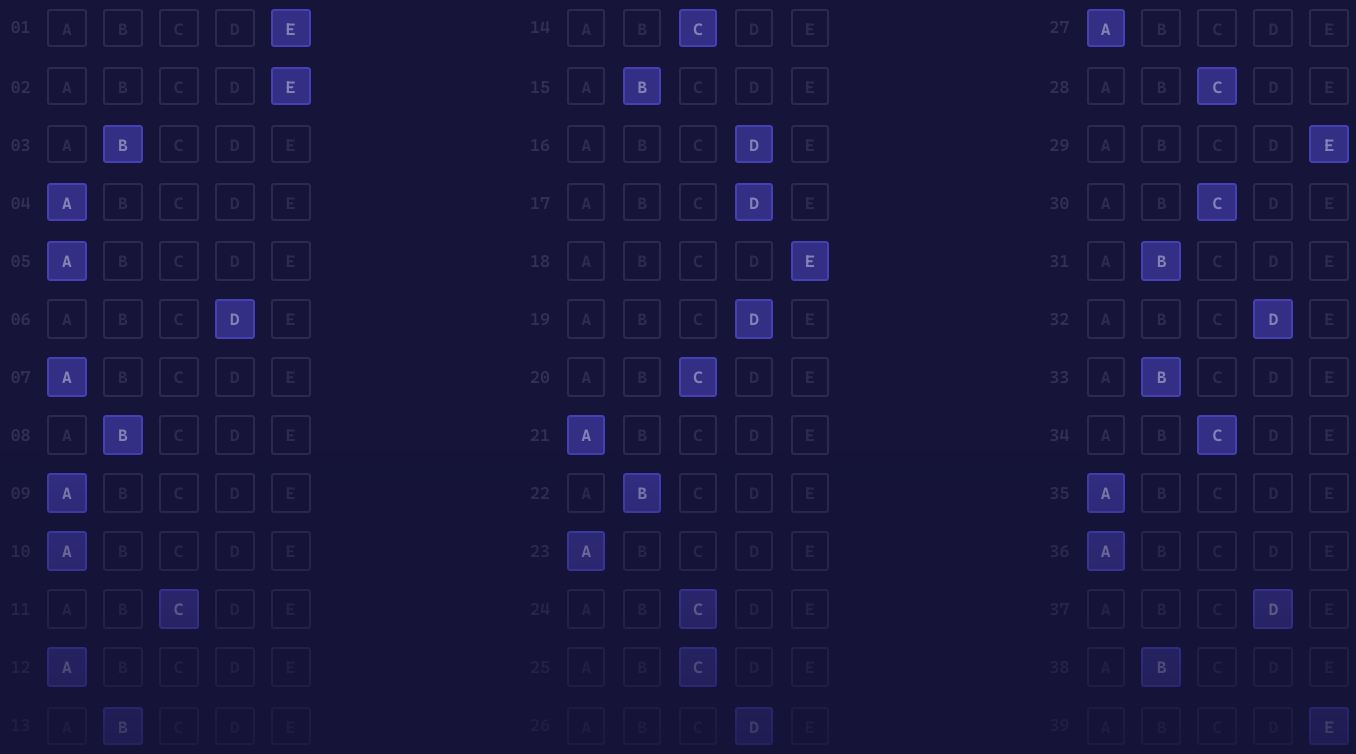

PRACTICE QUESTIONS

California - Nevada Section American Water Works Association

VFWGBSXS

CA-NV AWWA BPAT Troubleshooting

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for California - Nevada Section American Water Works Association `VFWGBSXS`, 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, `VFWGBSXS`
- the question number
- the email address on your order

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

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QUESTION 1 SINGLE CHOICE

A water operator responds to a customer complaint about low pressure in a residential area. Which of the following is the FIRST action the operator should take when troubleshooting?

A Open the nearest hydrant to flush the suspected main.

B **Verify the pressure reading using a calibrated gauge at the nearest fire hydrant.**

C Increase the pump discharge pressure at the treatment plant.

D Shut down the affected zone to prevent backflow.

ANSWER B

WHY Troubleshooting must begin with verification of the actual condition using a properly calibrated instrument before any corrective action is taken. Opening a hydrant, changing pump settings, or shutting down a zone without first confirming the low-pressure condition could make the problem worse and create new problems such as contamination or service disruption.

QUESTION 2 SINGLE CHOICE

A customer reports chronic discoloration of water only at a single commercial property served by an irrigation system with a reduced-pressure principal backflow preventer (RP). The rest of the zone is clear. Which condition is the most likely cause?

A A main break upstream of the meter is causing system turbulence.

B **The RP relief valve is discharging and the device is fouled or leaking internally.**

C The customer's service line is undersized and causing low velocity.

D The water meter is undersized and restricting flow.

ANSWER B

WHY When only one customer is affected, the problem is almost always on the customer side of the meter. A fouled RP with an open or leaking relief valve will allow non-potable irrigation water (with rust, sediment, or organic debris) to bypass into the potable service line and discolor the water. Main breaks, undersized mains, and undersized meters would affect multiple customers in the zone.

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QUESTION 3 SINGLE CHOICE

A free chlorine residual of 0.05 mg/L is measured in a distribution storage reservoir, while the treated water leaving the plant consistently measures 1.2 mg/L. Which action is most appropriate FIRST?

A Immediately increase the chlorine dosage at the plant to 5 mg/L.

B Inspect the reservoir for sediment buildup, biofilm, and confirm the booster chlorinator is operating.

C Drain the reservoir and refill from the distribution system.

D Notify customers to boil their water.

ANSWER **B**

WHY A large loss of chlorine residual in a reservoir is most commonly caused by high chlorine demand in the reservoir itself (sediment, biofilm, organic matter) or by an inoperative or improperly set booster chlorinator. The operator should first inspect the reservoir and verify the booster system. Raising the plant dose is unlikely to fix an in-storage problem, and draining the reservoir or issuing a boil advisory are disproportionate responses to a residual loss that has not yet violated the system's compliance requirements.

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QUESTION 4 SINGLE CHOICE

A centrifugal pump is running but discharge pressure has dropped sharply and the amp draw is below normal. Which condition is the MOST likely cause?

A The motor bearings have seized.

B The suction line is plugged or the suction valve is closed, causing cavitation/air entrainment.

C The discharge check valve is stuck open.

D The pump is rotating in the reverse direction.

ANSWER B

WHY A drop in discharge pressure combined with low amp draw indicates the pump is not moving water effectively. A plugged or closed suction line starves the pump, causing low flow and cavitation, and the reduced load lowers motor amperage. Seized bearings would draw high amps and likely trip the motor. A stuck-open check valve would not reduce pressure. Reverse rotation would also typically draw near-normal current while delivering very little flow, but suction-side blockage is the more commonly encountered field cause and is the textbook pairing of low pressure with low amp draw.

QUESTION 5 SINGLE CHOICE

An operator arrives at the site of a confirmed large-diameter main break with water surfacing in the street. Which sequence of actions is correct?

A Excavate to expose the pipe, then close the nearest valves to isolate the break.

B Close the appropriate valves to isolate the break, notify customers and the utility, then make the repair.

C Open nearby hydrants to reduce pressure on the broken main.

D Apply a full-encirclement repair clamp before isolating the break.

ANSWER B

WHY Safe and effective response to a main break requires first isolating flow by closing the appropriate valves, then notifying affected customers and coordinating with the utility, and only then making the repair. Excavating before isolation is dangerous and can worsen the break. Opening hydrants can waste water and does not isolate the break. Installing a clamp before isolation puts workers in a flooded trench with pressurized flow.

QUESTION 6 SINGLE CHOICE

A SCADA screen at the treatment plant shows that a remote reservoir level transmitter reads '---' (no signal) but the intrusion and power alarms for that same site are normal. What is the most likely cause?

A The reservoir has overflowed and the transmitter has failed because of submersion.

B The level signal (analog) channel has failed while digital status signals are still reporting.

C The SCADA server has lost its license for that site.

D The remote site has lost commercial power.

ANSWER B

WHY Power and intrusion are digital status inputs that share communications but are independent of the analog level channel. A 'no signal' on level with normal power/intrusion indicates the analog input, its transmitter, or its RTU channel has failed rather than a site-wide communications or power problem. A SCADA license loss would affect the whole site, and a power loss would also raise the power alarm.

QUESTION 7 SINGLE CHOICE

An operator needs to enter a below-grade pump station wet well to retrieve a stuck trash rake. Which condition must be confirmed BEFORE entry?

A The pump is locked out and the wet well has been ventilated and tested for atmospheric hazards.

B The pump is operating at reduced speed to circulate fresh air.

C The wet well has been partially filled with clean water to displace gases.

D The level controller has been set to 'manual' mode.

ANSWER A

WHY Confined-space entry into a wet well requires lockout/tagout of energy sources and atmospheric testing (oxygen, LEL, H2S, CO) after forced ventilation. Running the pump does not make the space safe and can draw the worker into the suction. Adding water does not displace hazardous gases safely. 'Manual' mode is an operational setting, not a safety control.

QUESTION 8 SINGLE CHOICE

Multiple customers in one pressure zone report a strong 'rotten egg' odor from their hot water only. Cold water has no odor. Which cause is most likely?

A A hydrogen sulfide leak in the distribution main.

B A sulfur-reducing bacteria reaction occurring in the customer's water heater.

C A chlorine overdose at the treatment plant.

D A cross-connection with a boiler chemical feed.

ANSWER B

WHY Sulfur-reducing bacteria can colonize the anode rod and sediment in a water heater, producing hydrogen sulfide gas that smells like rotten eggs, especially when the water has sat (overnight, after a trip). Because the reaction occurs inside the heater, only hot water is affected. A main-side H2S problem would also show in cold water. Chlorine overdose does not produce a rotten-egg odor. A cross-connection with boiler chemicals would typically affect a closed heating loop, not all hot taps.

QUESTION 9 MULTIPLE CHOICE

Which of the following actions are required when collecting a routine bacteriological water sample from a distribution sampling station? (Choose two.)

A Use a sterile, single-use sample bottle and do not rinse it before filling.

B Open the tap fully and let water run for at least five minutes before collecting the sample.

C Collect the sample after flame-sterilizing the tap or disinfecting it, then flushing briefly per the standard procedure.

D Fill the bottle to the brim and cap it tightly while still under the stream of water.

ANSWER A · C

WHY Standard practice (per Standard Methods and AWWA guidance) is to use a sterile, single-use bottle and NOT rinse it out (rinsing would wash away the sodium thiosulfate that neutralizes chlorine and would contaminate the bottle). The tap must be disinfected (typically by flaming or wiping with a chlorine solution) and then flushed to obtain a representative sample. Extended flushing of five minutes is excessive for a routine bacteriological sample and is used for lead and copper, not coliform, sampling. Bottles are filled to a marked line, not to the brim, and should not be capped under the stream.