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PRACTICE QUESTIONS

Association of Boards of Certification

RZH7TT5F

WPI Wastewater Collection Operator Class 3

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for Association of Boards of Certification **RZH7TT5F**, 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, **RZH7TT5F**
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

When hydraulically cleaning a sewer main, what is the primary reason for selecting a hydraulic nozzle with the appropriate nozzle angle (such as 5°, 15°, or 30°)?

- ☐ A The angle determines the hose diameter required for the cleaning operation.
- ☐ B The angle controls the volume of water delivered by the nozzle.
- ☒ C The angle affects the spray pattern and force applied to the pipe wall for removing deposits.
- ☐ D The angle determines whether the nozzle can be connected to a jetter or a vactor truck.

ANSWER C

WHY Nozzle angle is selected to balance cleaning effectiveness with pipe integrity. Lower angles (around 5°) deliver a more concentrated, longer-throwing jet for longer runs, while wider angles (around 15°–30°) provide a broader spray to scour deposits and flush debris back toward the manhole. The angle does not control hose diameter, pump volume, or equipment compatibility.

QUESTION 2

SINGLE CHOICE

During routine inspection of a submersible lift station, an operator notes that the pump's thermal overload protection has tripped, shutting the pump down. Which condition would most likely cause this protective device to activate?

- ☐ A A clogged check valve at the discharge piping.
- ☒ B Excessive debris accumulation on the pump impeller causing over-amperage.
- ☐ C A drop in the incoming voltage from the utility.
- ☐ D Air becoming trapped in the volute of the pump.

ANSWER B

WHY Thermal overload devices protect the motor from overheating caused by excessive current draw. A clogged impeller makes the pump work harder, drawing higher amperage and generating additional heat, which trips the overload. A clogged check valve causes backflow issues rather than motor overheating, voltage drops typically cause under-voltage trips, and air in the volute reduces pumping capacity but does not directly overload the motor.

QUESTION 3

SINGLE CHOICE

In a wastewater collection system, which appurtenance is installed at the upstream end of a building sewer to provide access for rodding or cleaning of the building side without entering the public main?

- ☒ **A Cleanout**
- ☐ B Manhole
- ☐ C Lamphole
- ☐ D Drop manhole

ANSWER A

WHY A cleanout is a small access point, typically a capped wye or a riser to grade, installed on the building sewer to allow rodding or jetting from the building side toward the main. A manhole provides access to the main itself, a lamphole is an obsolete small vertical shaft used for lowering a light, and a drop manhole is used where a sewer drops significantly in elevation at a manhole.

QUESTION 4

MULTIPLE CHOICE

Before entering a confined space such as a deep manhole, which of the following actions are required as part of a properly executed entry program? (Choose three.)

- ☐ A Test the atmosphere for oxygen, flammable gases, and toxic gases in that order.
- ☒ **B Provide a trained attendant stationed outside the space maintaining communication with the entrant.**
- ☐ C Run the lift station pumps continuously to ventilate the space with moving air.
- ☒ **D Verify that a retrieval system, such as a tripod and winch, is in place before entry.**
- ☒ **E Issue a written entry permit identifying hazards, entry conditions, and authorized personnel.**

ANSWER B • D • E

WHY Confined space entry programs (per OSHA 29 CFR 1910.146) require atmospheric testing for oxygen first, then flammable and toxic gases (so option A is the correct order), an attendant stationed outside, a retrieval/rescue system ready for use, and a written permit identifying authorized entrants, hazards, and entry conditions. Running pumps does not substitute for mechanical ventilation and is not a recognized control for atmospheric hazards.

QUESTION 5

SINGLE CHOICE

Which of the following is most characteristic of inflow rather than infiltration in a sanitary sewer system?

- ☐ A Groundwater seeping through defective pipe joints during high groundwater periods.
- ☒ B Stormwater entering through a broken manhole frame sealed with cracked mortar.
- ☐ C Soil fines migrating into the collection system through lateral connections.
- ☐ D Constant baseflow observed during dry weather from defective service taps.

ANSWER B

WHY Inflow is stormwater that enters the sanitary system directly through points such as manhole lids, manhole frames, and cross-connections during rainfall events, producing sharp flow peaks. Infiltration is groundwater entering through defects in pipes, joints, and manhole walls and tends to vary with seasonal groundwater levels. Options A, C, and D describe infiltration patterns.

QUESTION 6

SINGLE CHOICE

A sewer main has a flow of 1.5 million gallons per day (MGD). How many gallons per minute (gpm) is the flow, rounded to one decimal place?

- ☐ A 625.0 gpm
- ☒ B 1,041.7 gpm
- ☐ C 1,500.0 gpm
- ☐ D 2,160.0 gpm

ANSWER B

WHY Convert MGD to gpd then divide by the minutes in a day (1440). $1,500,000 \div 1440 = 1041.666...$ gpm, which rounds to 1041.7 gpm. Option A would result from dividing by 2400, option C is the original MGD, and option D ($2,160,000 \div 1000$) is the conversion to gallons per minute from MGD using an incorrect factor.

QUESTION 7

SINGLE CHOICE

During routine sewer main cleaning with a high-velocity jetter, the nozzle is being pulled upstream toward the manhole while cleaning. What is the principal advantage of working the nozzle from the downstream manhole toward the upstream manhole rather than in the opposite direction?

- ☐ A It reduces the wear on the hose as it is pulled against the flow.
- ☒ B It allows debris loosened by the jets to be flushed downstream with the flow.
- ☐ C It eliminates the need for a second operator at the upstream manhole.
- ☐ D It increases the water pressure delivered to the nozzle.

ANSWER B

WHY Working the nozzle upstream (against the flow) allows the rearward-directed jets to pull the hose and propel the nozzle forward, while the front jets scour and loosen deposits. The rearward jets then push debris downstream with the flow toward the manhole where the hose is being retrieved, so solids are flushed out of the line as the nozzle advances. The other options misrepresent hydraulic or operational effects of the cleaning direction.

QUESTION 8

SINGLE CHOICE

A collection system crew must perform a manhole inspection on a busy two-lane urban street. Which combination of practices best addresses traffic hazards around the work zone?

- ☐ A Place a single traffic cone next to the open manhole and rely on approaching motorists to merge.
- ☒ B Deploy a proper work zone with advance warning signs, high-visibility apparel, and channelizing devices meeting MUTCD guidance.
- ☐ C Close only the parking lane and leave the travel lane open without warning devices.
- ☐ D Use the open manhole cover itself as the primary warning device.

ANSWER B

WHY Working on active roadways requires a temporary traffic control zone set up in accordance with the MUTCD (Manual on Uniform Traffic Control Devices), including advance warning signs, cones or barrels to channel traffic, and high-visibility garments for all workers. A single cone, leaving a travel lane unmarked, or using the manhole cover as a warning device are all inadequate and unsafe in a high-volume traffic setting.

QUESTION 9

MULTIPLE CHOICE

Which of the following defects are typically identified during a CCTV inspection of a sewer main? (Choose two.)

- ☒ **A** Misaligned pipe joints causing visible infiltration at the joint.
- ☐ **B** Soil bearing capacity beneath the pipe.
- ☐ **C** Cracked or fractured pipe sections with visible pipe wall damage.
- ☐ **D** Chemical oxygen demand (COD) of the wastewater.
- ☒ **E** Roots protruding through pipe joints or service connections.

ANSWER A • E

WHY CCTV inspection is used to visually assess the interior condition of the pipe and identify structural and operational defects such as misaligned joints with infiltration, cracks or fractures, root intrusion, sags, and grease buildup. Soil bearing capacity and wastewater characteristics such as COD are not determined by a CCTV inspection; those require geotechnical analysis and laboratory testing, respectively.