



NOTE: Read all the responses to each question before selecting your answer. More than one response may be partially correct. Choose the answer which is most correct. The appropriate tank / sump and riser installation instructions should be referenced during the exam. Must have 17 of 19 correct to pass.

PLEASE PRINT LEGIBLY

This form **MUST** be complete in order to receive your acknowledgment of training:

Company Name: _____

Primary Company Contact: _____

Company Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Fax Number: _____

Email Address: _____

Number of Correct Responses: _____ (minimum of 17 correct responses required)

Number of Incorrect Responses: _____

Keep this form and the test along with a copy of the ATTACHMENT E for your records

- To Complete Registration:**
- 1. Complete the test.**
 - 2. Complete Form - Confirmation of Training - Attachment E (Pub. No. INST 6040)**
 - 3. Put each attendee's name and score on Attachment E form.**
 - 4. Please keep the completed test and a copy of the Attachment E form.**
 - 5. Send completed Attachment E to Containment Solutions for Acknowledgement of Training**

The Attachment E form can be accessed online at containmentsolutions.com and filled out and submitted electronically.

DIRECTIONS: CHOOSE THE BEST ANSWER FROM THE CHOICES LISTED FOR EACH QUESTION. CIRCLE THE CORRESPONDING LETTER. THERE MAY BE MULTIPLE OPTIONS WHICH ARE TRUE FOR A GIVEN QUESTION BUT ONLY ONE CORRECT ANSWER.



1. Entering what type of tank sump would constitute a confined entry space?
 - a. An assembled sump but not yet operational
 - b. A 2' high polygon sump bottom that allows for the easy entry and exit from the sump without assistance
 - c. A 48" diameter by 5' high turbine sump
 - d. Both A and B
 - e. Both A and C
2. The following conditions must be met in order to activate the limited warranty:
 - a. The critical steps of the installation must be video recorded
 - b. The sump inspection checklist must be properly completed and signed by the contractor and end user.
 - c. The contractor must follow the CSI DW tank sump instructions
 - d. CSI assembly kits must be used
 - e. B, C and D
3. When unloading tank sumps from the delivery truck:
 - a. You should roll the sumps off the truck
 - b. Visually inspect each sump for shipping damage
 - c. Set sumps on a smooth surface
 - d. Both A and B
 - e. Both B and C
4. When can assembly kits (Kit-AD or Kit-LK) be used?
 - a. Within 3 years
 - b. Within 90 days of date listed on box
 - c. As long as it isn't clumpy
 - d. Both A and B
 - e. Both B and C
5. When installing the tank sump body extension on a fill/vapor sump you should:
 - a. Confirm the enclosure top and reservoir are level before completing the joints
 - b. Make final field height adjustments by trimming the bottom of the FRP watertight lid
 - c. Verify the reservoir opening is oriented 90° from the tank centerline
 - d. Maintain a minimum 2" on the tank sump body extension to complete the interior joint
 - e. Both A and C
6. After properly cleaning the mating surface of the EZ Fit Adhesive Channel:
 - a. Channel mesh should be cut into 6" sections and evenly spaced around the exterior joint
 - b. Nylon rope should be wedged into uneven gaps to prevent adhesive from escaping
 - c. Channel mesh should be inserted 360° in adhesive joint
 - d. Sprinkle gravel and dirt into joint before inserting channel mesh
7. In order to properly prepare the tank sump and collar joints for bonding, you should:
 - a. Wipe the bonding surface with an oil based solvent
 - b. Sand the surface with the factory supplied sand paper then wipe the surface clean with a dry cloth
 - c. Scrub the surface with bio-degradable soap and water
 - d. Add supplemental heat to the surface when temperatures are below 60° F
 - e. Both B and D



8. Gaps between two (2) joints greater than $\frac{1}{4}$ ":
 - a. is ok to proceed in applying glass mat
 - b. MUST be covered with $\frac{1}{4}$ " width tape
 - c. there should not be a gap between two (2) joints
 - d. MUST be covered with $\frac{1}{2}$ " width tape
9. Before moving sump parts, joint adhesive should cure for at least:
 - a. 36 hours
 - b. Overnight
 - c. 18 hours
 - d. 24 hours
 - e. 5 hours (Up to 24 hours)
10. In order to properly complete a Layup Joint you should always:
 - a. Apply 2 layers of dry glass mat
 - b. Overlap 3 layers of saturated mat at least 4 inches
 - c. Apply 3 layers of fiberglass layup, saturated with resin, 360° around tank sump, centered on joint
 - d. Allow layup to cure a minimum of 5 hours (up to 24 hours)
 - e. Both C and D
11. In order for the Watertight Lid to remain watertight you should:
 - a. Angle the fins in the direction of the lid
 - b. Splice extra gasket as needed and fuse the gasket ends together in the field
 - c. Remove lubricant with a soft dry cloth
 - d. Ensure gasket is installed with the fins angled down and away from lid.
12. Prior to backfilling around an assembled sump the following Post Assembly Test procedure should be followed:
 - a. The annular space should be pressurized to 5 psig
 - b. The annular space should be pressure tested to 3 psig and held for 30 minutes
 - c. The annular space should be pressure tested to 3 psig and held for 30 minutes while applying a soap and water solution to both the inside and outside of the sump/collar walls.
 - d. Pull a vacuum for 7 days and monitor for leaks
13. The annular space on a double-wall sump may be continuously monitored in the following manner:
 - a. Positive air pressure
 - b. Hydrostatically by using CSI supplied brine monitoring solution
 - c. Hydrostatically by using CSI supplied propylene glycol monitoring solution
 - d. B, C and E
 - e. Vacuum not to exceed 5 psig (10.2 Hg)
14. Before initially filling the annular space with monitoring fluid you must:
 - a. Connect a clear PVC tube to the drain fitting inside the tank collar
 - b. Remove the permanent $1\frac{1}{2}$ " reservoir plug and install the $1\frac{1}{2}$ " fill fitting included in the MFFK Kit
 - c. Use the CSI provided MFFK kit
 - d. Both A and C
 - e. Both B and C



15. If the reservoir sensor indicates an alarm condition:
- You should immediately check the position of the sensor to make sure it is sitting level in the reservoir
 - Test the sensor for proper operation and confirm the monitoring fluid is properly set
 - Ignore it until later
 - Both A and B
16. Approved backfill must meet the following:
- The dry density must be 90 pounds per cubic foot
 - Pea Gravel particle sizes no larger than $\frac{3}{4}$ " with no more than 5% passing a #8 sieve
 - Crushed stone particle sizes no larger than $\frac{1}{2}$ " with no more than 5% passing a #8 sieve
 - Both A and B
 - Both B and C
17. When a concrete surface slab is used above the tank sump:
- Concrete should be poured directly onto the sump enclosed top
 - Concrete should be poured directly onto a 5' x 5' x $\frac{3}{4}$ " rigid board with appropriate cut out for access to the sump top
 - The access manhole should be slightly smaller than the sump lid
 - All sumps must be isolated from direct traffic loading
 - Both B and D
18. Operating Guidelines require the following:
- No further testing is required after sump modifications / repairs are made
 - Only qualified personnel with proper training and safety equipment may enter a sump
 - During the life of the installation the sump must comply with all Federal, Provincial, State and Local regulations.
 - The tank sump must be continuously monitored with an electronic leak detector
 - B, C and D
19. The Tank Sump Installation Checklist:
- Never needs to be completed
 - Is not required if there is a warranty claim in the future
 - Only needs to be signed by the tank sump owner
 - Will be required when making a warranty claim

