

## 653 Examination Sample Items

The items below are examples of what an exam item might look like. If you have questions about an item or disagree with the answer, please email us at [inspector@api.org](mailto:inspector@api.org) and we will forward your concern to one of our subject matter experts.

Correct Answer: 4

A. Corrosion on the bottom side of floor plates in aboveground storage tanks is affected most by:

1. composition of the contents stored in the tank.
2. welding procedures used during construction of the tank.
3. the metal used for construction of the tank floor.
4. soil characteristics directly underneath the tank.

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Correct Answer: 3

B. Except for cast iron parts, internal coils and supports may be:

1. dye penetrant tested.
2. leak tested.
3. hammer tested.
4. magnetic particle tested.

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Correct Answer: 4

C. At the next out-of-service inspection on a tank that has had a hot tap performed, the visual inspection should include:

1. size of the hot tap nozzle holes.
2. thickness of the plate at the hot tap.
3. height of the hot tap from the tank bottom.
4. trimming of the hot tap nozzle holes.

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Correct Answer: 1

D. If arc strikes, gouges, or tears from temporary attachments are identified, they:

1. must be evaluated on a case-by-case basis.
2. must be repaired by welding with an appropriate repair procedure.
3. must be repaired by removing the plate area containing the scars and welding in a butt-welded patch.
4. are acceptable, provided they are more than 2 feet from any weld seam.

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Correct Answer: 3

E. In an examination of a tank's bottom weld seams by vacuum box testing, the vacuum pressure required for each test is:

1. a near perfect vacuum, absolute.
2. ½ to 1 pound per square inch gauge, negative (vacuum).
3. at least 2 pounds per square inch gauge, negative (vacuum).
4. 14.696 pounds per square inch absolute, at mean sea level.

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Correct Answer: 4

F. Partial or complete jacking of a tank shell is considered:

1. routine maintenance.
2. a minor alteration.
3. a minor repair.
4. a major repair.

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Correct Answer: 4

G. When a tank is being dismantled for relocation, the roof, shell, and bottom plates may be cut:

1. to one-half the size of the original plates.
2. along the existing weld seams for transportation to the new site.
3. to a size no smaller than one-half the maximum weight allowed by the transporting vehicle including the crane.
4. to pieces of any size that are readily transportable to the new site.

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Correct Answer: 2

H. During a tank reconstruction, under what circumstances may a new shell-to-bottom weld be *exempt from* hydrostatic testing?

1. When the root pass has been visually inspected and the final weld is fully examined, visually and radiographically.
2. A shell-to-bottom weld is never exempted from hydrostatic testing.
3. When the root pass has been visually inspected and the final weld is fully examined, visually and by vacuum box.
4. When the welding method has been reviewed and approved by an engineer experienced in tank design in accordance with API Standard 650.

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Correct Answer: 3

I. In atmospheric conditions, bottom coatings may be applied if the steel temperature is:

1. 2° F above the dew point.
2. 5° F below the dew point.
3. 10° F above the dew point.
4. at the dew point.

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Correct Answer: 1

J. In evaluating the level of cathodic protection by measuring potentials at the tank perimeter, correction of measurements may be required to adjust for:

1. voltage (IR) drop in the soil.
2. the type of system - sacrificial or impressed current.
3. prevailing weather at the time of measurement.
4. the age of the tank bottom.

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Correct Answer: 3

K. According to API Standard 653, section 1, which one of the following bears ultimate responsibility for compliance with the provisions of the Standard?

1. Inspector
2. Vendor/fabricator
3. Owner/operator
4. API Committee