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

PRACTICE QUESTIONS

National Inspection Testing and Certification Corporation

JLFT

Journey Level Steamfitter/Pipefitter

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for National Inspection Testing and Certification Corporation JLFT , 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, JLFT
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

A journeyman steamfitter/pipefitter is installing a horizontal steam main and needs a fitting that allows the pipe to change direction by 90° while maintaining smooth flow with minimal pressure drop. Which fitting is most appropriate for this application?

- ☐ A A standard screwed steel ell
- ☒ B A long-radius (LR) welded butt-joint elbow
- ☐ C A standard short-radius (SR) welded elbow
- ☐ D A cast iron drainage tee

ANSWER B

WHY Long-radius (LR) elbows, typically with a center-to-face dimension of 1.5 times the pipe diameter (1.5D), are the standard for steam and high-pressure piping because they reduce turbulence and pressure drop compared to short-radius elbows. Screwed steel ells are typically used for low-pressure, smaller-diameter lines, and cast iron drainage fittings are not rated for pressurized steam service.

QUESTION 2

SINGLE CHOICE

A piping run must rise 18 inches over a horizontal distance of 24 feet. What is the slope of the pipe expressed as a percent, and does it meet the typical minimum slope requirement of 1/4 inch per foot for condensate drainage on a steam main?

- ☐ A 0.75%, which meets the minimum slope
- ☒ B 6.25%, which meets the minimum slope
- ☐ C 6.25%, which does not meet the minimum slope
- ☐ D 1.5%, which does not meet the minimum slope

ANSWER B

WHY $\text{Slope (\%)} = (\text{rise} / \text{run}) \times 100 = (18 \text{ in} / 288 \text{ in}) \times 100 = 6.25\%$. The minimum requirement is 1/4 inch per foot = 2.083%. Since 6.25% is greater than 2.083%, the slope meets (and exceeds) the minimum requirement.

QUESTION 3

SINGLE CHOICE

When preparing a steel pipe end for a screwed joint, what is the correct sequence of operations?

- ☐ A Ream, cut, thread, deburr
- ☒ B Cut, ream, thread, deburr
- ☐ C Cut, thread, ream, deburr
- ☐ D Thread, cut, deburr, ream

ANSWER B

WHY The standard sequence for preparing a pipe end for threading is: (1) cut the pipe to length with a pipe cutter or hacksaw, (2) ream the inside diameter to remove the burr created by cutting, (3) thread the pipe using a pipe die, and (4) deburr the outside of the cut to remove any remaining sharp edges. Cutting after threading would destroy the threads; threading before reaming leaves the burr trapped inside.

QUESTION 4

SINGLE CHOICE

A steamfitter must perform hot work (oxy-fuel cutting) on an existing carbon steel pipe that previously carried a flammable liquid. Before the hot work begins, which document must be completed and authorized at the jobsite?

- ☐ A A confined space entry permit
- ☒ B A hot work permit
- ☐ C A fall protection plan
- ☐ D A crane lift plan

ANSWER B

WHY A hot work permit is required by OSHA (29 CFR 1910.252) and standard construction safety practice whenever open flames or spark-producing operations (such as oxy-fuel cutting or welding) are performed, especially near areas where flammable or combustible materials may be present. The permit documents the hazard assessment, fire watch requirements, and authorization to proceed.

QUESTION 5

SINGLE CHOICE

Which type of valve is most appropriate for use as a mainline shutoff in a high-pressure steam system, where full flow with minimal pressure drop is required and the valve will be either fully open or fully closed?

- ☐ A Globe valve
- ☒ B Gate valve
- ☐ C Swing check valve
- ☐ D Angle globe valve

ANSWER B

WHY Gate valves are designed for on/off service in straight-line flow. When fully open, the gate is fully retracted into the bonnet, providing an unobstructed flow path with minimal pressure drop, which makes them ideal for mainline steam isolation. Globe valves are throttling valves with high pressure drop; swing check valves prevent backflow but are not designed for frequent shutoff.

QUESTION 6

SINGLE CHOICE

A crew is preparing to lift a 12-foot section of 8-inch steel pipe (filled with water) using a choker hitch. The pipe weighs approximately 114 lb per foot empty. After accounting for the water, the total load is about 1,800 lb. Which factor is most important to verify before lifting?

- ☐ A The pipe's color code
- ☒ B The sling's rated capacity for the hitch type and sling angle
- ☐ C The number of bolts on the pipe flanges
- ☐ D The pipe's pressure rating stamp

ANSWER B

WHY The most critical pre-lift verification is the sling's rated working load limit (WLL) for the specific hitch configuration and sling angle. Slings lose capacity as the angle from horizontal decreases, and a choker hitch typically reduces capacity to about 75% of a vertical hitch rating. The pipe's color, flange bolts, or pressure rating are unrelated to safe rigging capacity.

QUESTION 7 SINGLE CHOICE

On a piping isometric drawing, what does a symbol consisting of a triangle with the letter 'B' inside it, placed on a pipe run, typically indicate?

- ☐ A A butterfly valve
- ☐ B A boiler feed connection
- ☒ C A branch connection
- ☐ D A blow-down valve

ANSWER C

WHY On isometric piping drawings, a small triangle placed on the pipe run is a standard symbol for a branch connection (weldolet, sockolet, or threadolet, depending on the standard). The letter inside or near the triangle identifies the type and size. A butterfly valve is shown by its own distinct valve symbol; boiler feed and blow-down are typically labeled rather than symbolized by a single letter inside a triangle.

QUESTION 8 SINGLE CHOICE

A new 6-inch high-pressure steam line must be pressure tested before being placed in service. Which test method is generally required by code and industry practice for a steel steam piping system?

- ☐ A Pneumatic (air) test at the same pressure as the operating pressure
- ☒ B Hydrostatic test at 1.5 times the maximum allowable working pressure (MAWP)
- ☐ C Vacuum test at 29 inches of mercury
- ☐ D Soap bubble test at 5 psig

ANSWER B

WHY ASME B31.1 (Power Piping) requires a hydrostatic test at 1.5 times the design pressure (or MAWP) for steel piping systems. Pneumatic testing of steam systems is restricted by code because of the stored energy hazard if a rupture occurs. Vacuum testing and low-pressure soap bubble tests are not accepted as substitute strength tests.

QUESTION 9

MULTIPLE CHOICE

A journeyman must enter a below-grade utility vault to repair a leaking condensate line. Which of the following must be in place before entry is permitted? (Choose two.)

- ☒ **A** A confined space entry permit signed by an authorized person
- ☐ **B** Atmospheric testing for oxygen, flammability, and toxics performed in that order
- ☐ **C** A torque wrench calibrated within the last 24 hours
- ☒ **D** An attendant stationed outside the space and rescue equipment available
- ☐ **E** A piping isometric drawing for the line being repaired

ANSWER **A • D**

WHY Per OSHA 29 CFR 1910.146, a written confined space entry permit must be completed and signed by an authorized entrant representative before entry, and an attendant must be stationed outside with rescue equipment readily available. Atmospheric testing (oxygen, then flammability, then toxics) is also required but the test order in option B is reversed (oxygen is first); however, both B and D could be argued. The two BEST answers are A and D because they are unambiguous requirements. Torque wrench calibration and isometric drawings, while good practice, are not entry prerequisites.