



THE RIGHT SKILLS ► A PROVEN ADVANTAGE

SAMPLE TEST QUESTIONS STEAMFITTER/PIPEFITTER -
ITA WEBSITE

- 1 Which tool is used to correct internal “hi-low” when preparing a 4-in. steel pipe for welding?
 - A. 4-in. grinder with cutting disc.
 - B. Mini-grinder with flapper disc.
 - C. Pencil grinder with cone stone.
 - D. 4-in. grinder with 1/4-in. grinding disc.

- 2 Which code governs the installation of pressure piping systems?
 - A. ASW
 - B. ASTM
 - C. CWB 471
 - D. ASME B31.1

- 3 Which type of hanger is used when thermal horizontal movement is a factor?
 - A. Roller.
 - B. Clevis.
 - C. Trapeze.
 - D. Constant support spring.

- 4 Which document is used for shop assembly?
 - A. Flow sheet.
 - B. Spool sheet.
 - C. Detail drawing.
 - D. Schematic drawing.



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- 5 A template is to be divided into 12 equal spaces. What is the angle between the ordinate lines?
- A. 15°
 - B. 30°
 - C. 45°
 - D. 60°
- 6 A template is to be located on a pipe, but a centre finder is **not** available. What else can be used to accurately mark the centerline?
- A. Wrap-around.
 - B. Tape measure.
 - C. 2-ft. level and plumb bob.
 - D. Framing square and level.
- 7 A 150-mm (6-in.) extra heavy weld neck flange is to be transitioned to Schedule 40 pipe. What is done to prepare the flange?
- A. Grind the outside of the flange to match the outside diameter of the pipe.
 - B. Grind the outside of the flange to match the inside diameter of the pipe.
 - C. Grind the inside of the flange to match the outside diameter of the pipe.
 - D. Grind the inside of the flange to match the inside diameter of the pipe.
- 8 A pipe is being suspended from a concrete structure using 1/2-in. wedge type female inserts (expansion shield) for supports. What is the procedure for installing the inserts after drilling the correct size hole?
- A. Place the insert and set the wedge.
 - B. Apply epoxy and install the anchor.
 - C. Place the insert and tighten the locking nut.
 - D. Insert the anchor and remove the locking nut.

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- 9 A press-fit joint is being assembled. What must be done at this joint location?
- A. Wash the joint inside and out with muriatic acid.
 - B. Grind the edge to a 35° bevel and insert into joint.
 - C. Clean the joint with sand cloth and apply acid flux.
 - D. Mark the circumference with a felt pen following pipe insertion.
- 10 During fit-up, the spool piece is found to be 3 mm (1/8 in.) too long. Based on the following information, what should be done?
- Piping system is 250-mm (10-in.) schedule 40.
 - Final piece is a 6-m (20-ft.) pipe spool flanged at both ends located between two risers.
 - Specifications require the use of 3-mm (1/8-in.) spiral wound gaskets.
- A. Apply liquid Teflon to supplement the spiral wound gaskets.
 - B. Use flange spreaders until the final gasket can be installed, then complete bolt-up.
 - C. Use ready-rod in holes at 90° intervals to push the joint apart until gaskets can be inserted.
 - D. Disconnect the previous flange, install 1.5-mm (1/16-in.) asbestos flat-ring gaskets and apply copper coat.
- 11 A sleeve is needed for a 300-mm (12-in.) pipe with a minimum of 38-mm (1 1/2-in.) clearance for insulation. Which size pipe is used for this sleeve?
- | METRIC | | IMPERIAL | |
|---------------|--------|-----------------|--------|
| A. | 300 mm | A. | 12 in. |
| B. | 350 mm | B. | 14 in. |
| C. | 400 mm | C. | 16 in. |
| D. | 450 mm | D. | 18 in. |



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- 12 A fabricated piece of 10-in. pipe, 45 ft. long weighs 40 lb. per lineal foot. What is the total weight of the load?
- A. 400 lb.
 - B. 450 lb.
 - C. 1 800 lb.
 - D. 3 600 lb.
- 13 A 12-m (40-ft.), 350-mm (14-in.) Schedule 80 pipe has to be moved 18 m (60 ft.) horizontally in a pipe rack. Which piece of rigging equipment is best suited for this task?
- A. Tirfor.
 - B. Chain fall.
 - C. Pinch bars.
 - D. Block and tackle.
- 14 How and shackles and pins stored when a job is complete?
- A. Place pins in shackles and store in a clean dry environment.
 - B. Remove pins from shackles and keep in an accessible rigging box.
 - C. Replace worn pins with bolts and keep in an accessible rigging box.
 - D. Replace worn pins with bolts and store together in a clean dry environment.
- 15 A low-pressure steam boiler has a set operating pressure 5 psig below the maximum allowed by the ASME code. The differential of the pressuretrol is 4 psig. What is the cut-in pressure?
- A. 3 psig
 - B. 6 psig
 - C. 16 psig
 - D. 21 psig



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- 16 What is the procedure for installing a water column on a high-pressure steam boiler?
- A. Tie in to water space and steam space with 25-mm (1-in.) pipe, and install test cocks and inspection crosses top and bottom.
 - B. Install both ends of water column below low water cut-off and tie in with 19-mm (3/4-in.) pipe.
 - C. Install both ends of water column in steam space with 25-mm (1-in.) pipe, and install test cocks and inspection crosses top and bottom.
 - D. Tie 50-mm (2-in.) pipe between the mud drum and the steam drum, and install a relief valve and a drain valve.
- 17 A reduction in pipe size is required in low pressure process steam line. How is the piping arranged to prevent water hammer?
- A. Eccentric reducer flat on top.
 - B. Concentric reducer flat on top.
 - C. Eccentric reducer flat on bottom.
 - D. Concentric reducer flat on bottom.
- 18 The condensate side of a steam trap is piped into an overhead condensate main. Which type of check valve is installed and what is the best location?
- A. Lift check valve installed at mid-point.
 - B. Stop check valve installed at mid-point.
 - C. Swing check valve installed close to the trap location.
 - D. Non-slam check valve installed closed to the main connection.



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- 19 What is installed on a pipe for an expansion joint on a 6-in. steam main in a pre-cast concrete tunnel?
- A. Anchors welded on the grating.
 - B. Guides attached to the concrete structure.
 - C. Bypass installed around the expansion joint.
 - D. Anchors and guides attached to the concrete structure.
- 20 What is installed with a chemical pot feeder that is serving a closed hydronic heating system?
- A. Injectors.
 - B. Isolating valves.
 - C. Circulating pump.
 - D. Pressure relief valve.
- 21 Where should a cooling tower be installed?
- A. Outside, in a ventilated area.
 - B. Outside, in an airtight structure.
 - C. As close as possible to the ventilator.
 - D. In the mechanical room, with adequate drainage.
- 22 Process steam is supplied to a brewery. Why is a economizer installed?
- A. To increase the temperature of the steam.
 - B. To separate the condensate from the steam.
 - C. To use the flue gas to preheat the feed water.
 - D. To remove dissolved gases from the feed water.

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- 23 Which type of gasket is most often used in a high-pressure hydraulic system assembled with socket weld flanges?
- A. O-ring.
 - B. Crush ring.
 - C. Spiral wound.
 - D. Asbestos fibre.
- 24 What is installed on a fuel oil system to remove suspended particles and prevent clogging of the nozzles?
- A. Trap.
 - B. Filter.
 - C. Screen.
 - D. Strainer.
- 25 How is a compressed air line installed to allow drainage of condensation from the piping system?
- A. By installing the piping level and providing a drip leg.
 - B. By grading up in the direction of flow with an air vent at the high point.
 - C. By installing the piping level and connecting branches to the bottom.
 - D. By grading down in the direction of flow towards the condensation collection point.
- 26 What should be verified before hooking up a pump for a hydrostatic test?
- A. That pump is installed after header.
 - B. That pump is installed without isolation valves.
 - C. That an orifice is installed between the pump and the test header.
 - D. That an isolation valve is installed between the pump and the test header.

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27 A system is rated for 10 500 kPa (1 500 psi). What is the minimum rating required when making up a test header?

METRIC

IMPERIAL

A. 7 000 kPa

A. 1 000 psi

B. 10 500 kPa

B. 1 500 psi

C. 15 750 kPa

C. 2 250 psi

D. 21 000 kPa

D. 3 000 psi

28 What could cause fluctuations on the test gauge reading during a 24-hour air test?

A. Change in elevation.

B. Change in volume of system.

C. Change in ambient air temperature.

D. Test air absorbed by moisture in the system.

29 What is the procedure to repair a broken fitting on a hydronic heating system using CPVC pipe?

A. Isolate, drain, remove joint, solvent weld to new spool and fitting, and install.

B. Isolate, drain, remove joint, apply primer, solvent weld to new spool and fitting, and install.

C. Isolate, drain, remove joint, apply primer to new spool and fitting, and install.

D. Drain, isolate, remove joint, apply primer, solvent weld to new spool and fitting, and install.



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- 30 Water hammering is occurring due to priming of a steam boiler. What is the main cause of the problem?
- A. Condensate is returning to the boiler under pressure.
 - B. Boiler water is traveling into the system with the steam.
 - C. Steam is returning to the boiler through the return main.
 - D. Both the continuous and intermittent blow-downs are open.