



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 an 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.