SAMPLE TEST QUESTIONS INSULATOR - ITA WEBSITE

1  Fibreglass vapour seal insulation is available in sheets 24 in. × 48 in. × 2 in., with 5 sheets per bundle. How many bundles of insulation are required to cover an area 80 ft. long by 22 ft. wide?
   A. 19
   B. 22
   C. 38
   D. 44

2  What is the surface area of a 30 in. square × 10 ft. long duct?
   A. 75 sq. ft.
   B. 90 sq. ft.
   C. 100 sq. ft.
   D. 105 sq. ft.

3  How many square feet of 1-in. flexible insulation is required to cover a 12 in. × 24 in. × 12 ft. supply duct including a 3-in. lap?
   A. 39 sq. ft.
   B. 42 sq. ft.
   C. 74 sq. ft.
   D. 83 sq. ft.

4  Which safety precaution is taken before entering an open 2 m (6 ft.) trench?
   A. Have a safety spotter.
   B. Check for work permit.
   C. Check shoring/back slope.
   D. Ensure equipment is grounded.
5. Which material should **not** be used to insulate a high temperature steam line?
- A. Mineral wool.
- B. Calcium silicate.
- C. Extruded foam plastic.
- D. Cellular glass (foam glass).

6. Which insulation should be used in a 1100°F high temperature steam line?
- A. Fibreglass.
- B. Cellular foam.
- C. Calcium silicate.
- D. Beaded plastics.

7. Which insulation and finish are used for an exposed rainwater leader?
- A. 1-in. fibreglass pipe insulation with ASJ jacketing with butt laps installed and finished with 6 oz. canvas.
- B. 1-in. flexible RFFRK wrap insulation sealed with tape and finished with 6-oz. canvas.
- C. 1-in. fibreglass pipe insulation with ASJ jacketing finished with 0.016 aluminum jacketing and secured with screws.
- D. 1-in. elastomeric insulation finished with PVC jacketing and secured with tacks.

8. Which size of pipe covering is applied to insulate a 12-in. O.D. pipe with two single 1/2-in. steam tracers?
- A. 11 in.
- B. 12 in.
- C. 13 in.
- D. 14 in.
9. Which type of sealant is applied over an insulated elbow covered with a glass fab membrane?
   A. Mastic.  
   B. Primer.  
   C. One coat.  
   D. Finishing cement.

10. What are the first three steps when starting the layout for metal jacketing on an elliptical tank head?
    A. Draw width, length and circumference.  
    B. Draw diameter, true height and circumference.  
    C. Draw width, length, and divide into equal parts.  
    D. Draw radius, true height, and divide into equal parts.

11. An insulated tower reduces from a 6-ft. diameter to a 2-ft. diameter. The tapered part is to be covered with four pieces of aluminium of equal size. Allowing for the standard 3-in. lap, what are the correct measurements?
    A. 54 in. and 16 in.  
    B. 57 in. and 19 in.  
    C. 60 in. and 22 in.  
    D. 63 in. and 25 in.

12. When is an S-clip installed on a large vertical vessel?
    A. To fasten bands and springs.  
    B. To support bands and cladding  
    C. To fasten insulation and cladding.  
    D. To support foamglass and banding.
13 Which system is used to fabricate a removable flexible flange cover for a moderate temperature application?
A. Elastomeric rubber and glue.
B. Fiberglass blanket and canvas.
C. Calcium silicate and aluminium.
D. Ceramic fibre blanket and vinyl covering.

14 Which insulation and installation method are used for a domestic cold water system in a concealed application?
A. 1-in. elastomeric foam, glued in place with non-contact adhesive.
B. 1-in. fibreglass with ASJ, installed with self-seal laps and foil tape.
C. 1-in. fibreglass with ASJ, installed with all butt joints.
D. 1/2-in. mineral fibre with ASJ, installed with all butt joints.

15 Which fastening system is used to secure insulation on refrigeration piping?
A. Pittwrap, mastic, and staples.
B. Glass fab, staples, and lagging.
C. Fibre tape, mastic, and wood skewers.
D. Glass fab, mastic, steel bands, and Pittwrap.

16 Which system requires a completely sealed vapour barrier?
A. Chilled water lines.
B. 140-lb. steam lines.
C. Hot water heating lines.
D. Domestic hot water lines.
17 What is the procedure to apply sealer when installing urethane on a chilled-water converter?

A. Use non-contact sealer, butter all joints and fasten seams with filament tape.
B. Use non-setting sealer, butter all joints and fasten seams with filament tape.
C. Use contact sealer, butter all joints and fasten seams with wire.
D. Contact sealer, butter all butt joints and fasten seams with galvanized banding and clips.

18 What is the procedure followed when installing insulation on a 90° long radius elbow on a low pressure steam line, which will be finished with a PVC jacketing?

A. Pre-cut urethane mitres and secure with stainless steel wire.
B. Install an insert cut from ceramic fibre block and tie in place with fibre tape.
C. Install 2 layers of fibreglass blanket and maintain continuous vapour barrier.
D. Pre-cut mitres with same insulation and thickness as materials and fasten with stainless steel wire.

19 A 20-ft. diameter storage tank has a temperature range of 250°C to 750°C. What is the correct finishing procedure?

A. 016 corrugated aluminium fastened with springs and bands.
B. 020 corrugated aluminium fastened with screws, springs and bands.
C. 016 smooth aluminium fastened with springs, bands and rivets.
D. 020 smooth aluminium fastened with bands and rivets.

20 What size of 4-oz. canvas is required to cover a 4 in. × 1 in. iron pipe 90° elbow?

A. 16 in. × 16 in.
B. 20 in. × 20 in.
C. 22 in. × 22 in.
D. 24 in. × 24 in.
21. Which fastener is used to apply a PVC finish on an exposed rainwater leader?
   A. Tacks.
   B. Rivets.
   C. Contact adhesive.
   D. Welding adhesive.

22. A rectangular plenum duct 24 in. × 18 in. requires 1 in. of insulation plus canvas. What is the length of each piece of canvas if 6 in. is required for shrinkage and lap?
   A. 94 in.
   B. 96 in.
   C. 98 in.
   D. 100 in.

23. Which type of fastening device is used to attach acoustic panels to a concrete ceiling?
   A. Cupped pins.
   B. 1/2-in. banding.
   C. Self-adhering pins.
   D. Perforated base anchors.

24. Where is a negative air fan for an enclosed asbestos work site located?
   A. Close to the entry outside the work area.
   B. Far from the entry outside the work area.
   C. Close to the entry inside the work area.
   D. Far from the entry inside the work area.
25 What is the procedure when preparing material and equipment for mineral fibre spray?

- A. Protect material from elements and clean equipment.
- B. Mix material, flush hoses with water and oil all moving parts.
- C. Keep material and hose cool and keep spray gun well lubricated.
- D. Keep material away from sunlight and flush hoses with solvent.

26 What must be adjusted to achieve the required thickness when spraying urethane insulation?

- A. Pump pressure.
- B. Opening of the nozzle.
- C. Consistency of the mixture.
- D. Rate of application to substrate.

27 Which procedure is used to prepare a sprayed mineral fibre substrate for sealer application?

- A. Spray substrate with adhesive.
- B. Level off substrate with a straight edge.
- C. Apply clips over insulation and tamp substrate.
- D. Clean and remove loose debris from substrate.

28 What must be done with the nozzle when storing polyurethane spray equipment?

- A. Left in place.
- B. Covered with tape.
- C. Replaced with a new nozzle.
- D. Lubricated with petroleum jelly.
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29 Which drawings in a set of blueprints are referenced in order to determine which rooms have to be fire-stopped?

A. Electrical and site.
B. Structural and electrical.
C. Structural and mechanical.
D. Architectural and mechanical.

30 Which type of penetration requires a fire-stop system using intumescent wrap strips in combination with an RC collar?

A. Iron pipe.
B. Glass pipe.
C. Electrical tray.
D. Copper pipe.