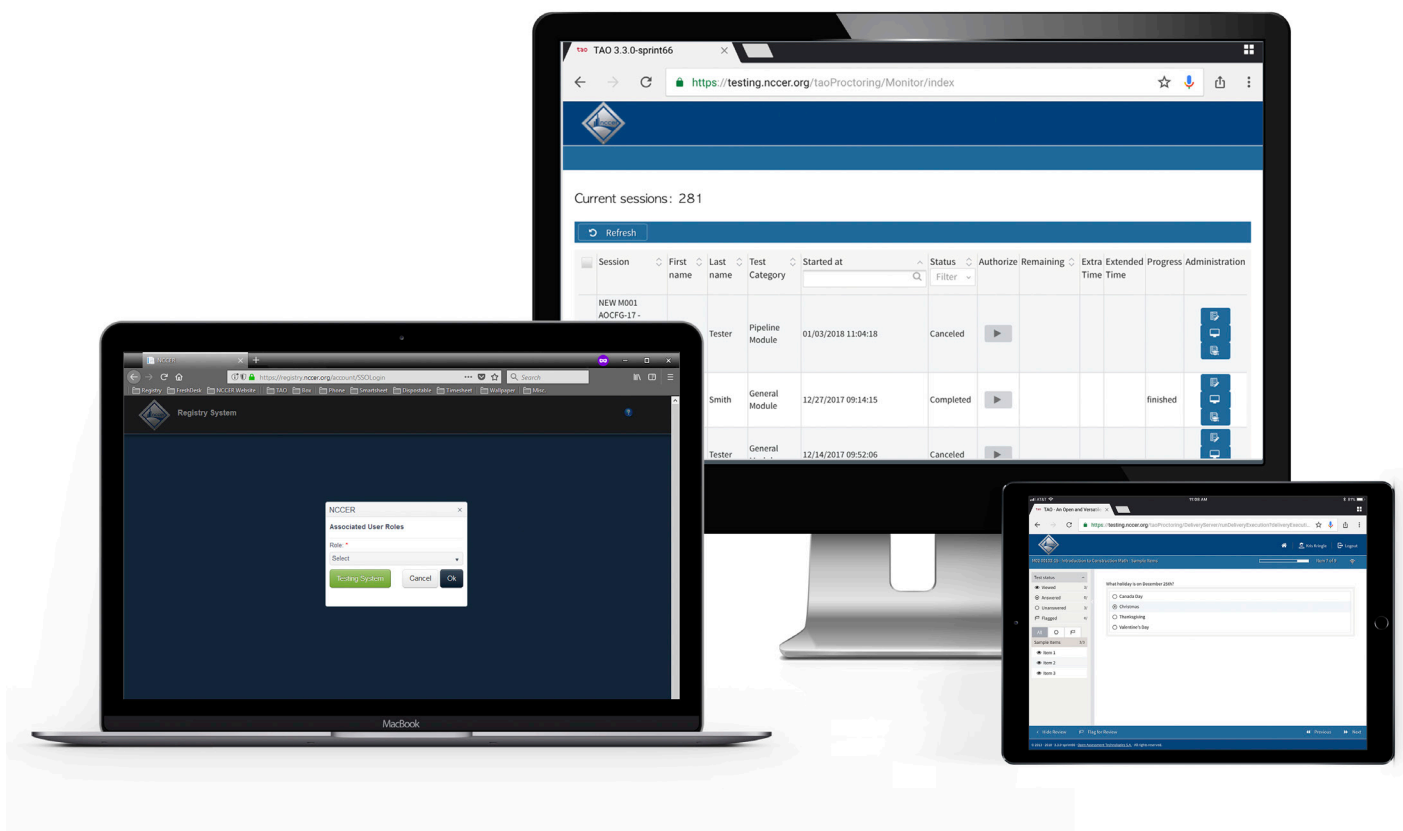


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Module 19212 Exam

Trade Math and Layout

Trainee Name: _____

Social Security Number: _____ Date: _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- Which of the following is an Imperial unit of measurement?
 - Centimeter
 - Celsius
 - Meter
 - Foot
- Which of the following statements about the metric system is true?
 - Its subunits are related by multiples of 10.
 - It was developed in France.
 - It is commonly used in the United States.
 - It easily converts to other systems of measurement.
- If the length of a section of insulation is 48" (122 cm), then on a drawing scaled to 1:12, its length would be _____.
 - 4" (10 cm)
 - 6" (15 cm)
 - 60" (152 cm)
 - 576" (1,463 cm)
- To reduce a fraction to lowest terms, you must divide the numerator and the denominator by the _____.
 - LCD
 - DOD
 - GCF
 - LAX
- A quadrilateral polygon has how many sides?
 - 3
 - 4
 - 6
 - 8
- How many side surfaces does a cylinder have?
 - 1
 - 3
 - 4
 - 8

7. Which of the following angles has an exact measurement?
 - a. Right angle
 - b. Acute angle
 - c. Obtuse angle
 - d. Complementary angle

8. Which of the following instruments can be used to measure any angle?
 - a. 45-45-90 drawing triangle
 - b. Drawing compass
 - c. Protractor
 - d. Calipers

9. Which of the following would be the best instrument for accurately marking black elastomeric foam while fabricating a complicated insulation covering?
 - a. No. 2 pencil
 - b. Knife
 - c. Scribe point
 - d. White grease pencil

10. Which of the following tools is helpful for drafting layouts that involve round ductwork and large pipes?
 - a. beam compass
 - b. Sharpie™
 - c. caliper
 - d. torus

11. To aid in drawing a non-circular arc during layout, the preferred instrument is a _____.
 - a. T-square
 - b. French curve
 - c. drafting compass
 - d. divider

12. Where is the front of the subject usually located in the standard top view of a scale technical drawing?
 - a. At the top
 - b. At the bottom
 - c. On the right
 - d. On the left

13. For insulation fabrication layout, in nearly every case, the first thing to do is _____.
 - a. draw horizontal and vertical axes on the paper or material
 - b. measure the object to be worked on
 - c. select a drawing scale
 - d. locate as-built plans

14. An as-built architectural drawing displays a scale of 1 inch = 1 foot. If a duct on this drawing labeled 18" wide, what is its actual width in the drawing?
- 1"
 - 1.5"
 - 12"
 - 18"
15. To make a scale 2D drawing of a circle, a compass must be set to the circle's scaled _____.
- circumference
 - perimeter
 - diameter
 - radius
16. In addition to a T-square, what single drafting instrument is the most useful for projecting dimensions between drawing views?
- Divider
 - Drafting compass
 - Drafting triangle
 - Ruler
17. Cylindrical pipe elbows are sections of what kind of 3D geometric figure?
- Cylinder
 - Cone
 - Torus
 - Sphere
18. The intersection of two equal-diameter cylinders will always include _____.
- a tee
 - a wavy seam between the cylinders
 - straight seams between the cylinders
 - right angles in the seam between the cylinders
19. Looking at a standard 90° pipe elbow from the side, you can assume that the curves of the inside (throat) and outside (heel) surfaces of the elbow _____.
- are all concentric
 - have equal radii
 - have different centers
 - all taper
20. With the intersection of two cylinders having different diameters, the developed edge of the larger cylinder will _____.
- be a straight line
 - contain ellipses
 - be a wavy line
 - contain right angles

Module 19212 Answer Key

Trade Math and Layout

Question	Answer	Section Reference	Objective
1.	D	1.1.0	1a
2.	A	1.1.0	1a
3.	A	1.2.0	1b
4.	C	1.2.0	1b
5.	B	1.3.1	1c
6.	A	1.3.4	1c
7.	A	1.4.0	1d
8.	C	1.4.0	1d
9.	D	2.1.1	2a
10.	A	2.1.1	2a
11.	B	2.1.2	2a
12.	B	2.2.0	2b
13.	B	2.3.1	2c
14.	B	2.3.1	2c
15.	D	2.3.3	2c
16.	C	2.4.1	2d
17.	C	2.4.2	2d
18.	D	3.1.1	3a
19.	A	3.1.2	3a
20.	B	3.2.3	3b