

Mock Exam Sample Questions for ARE Building Systems Webinar

1. A step down transformer has the following characteristics
 - Primary voltage of 240 volts
 - Primary current of 5 amps
 - Primary coil with twice as many turns as secondary coilWhat is the current and voltage on the secondary side of the transformer, neglecting any power losses?
 - A. 10 amps at 240 volts
 - B. 5 amps at 240 volts
 - C. 5 amps at 120 volts
 - D. 10 amps at 120 volts

2. A residential client has requested that a low velocity forced air system be designed for both heating and cooling. The building is located in a location with comparable heating and cooling degree days. Which of the following statements is true for this situation?
 - A. The duct system will be sized for heating mode.
 - B. The duct system will be sized for cooling mode.
 - C. The duct system is limited to high supplies only.
 - D. The duct system is limited to low supplies only.

3. What does the common abbreviation DX stand for?
 - A. Double Expansion
 - B. Direct Exit
 - C. Double Expulsion
 - D. Direct Expansion

4. Which type of transformer would you expect to see at a generation plant of a utility?
 - A. Step Down Transformer
 - B. Step Up Transformer
 - C. Air cooled transformer
 - D. Low voltage transformer

5. Which range is most reasonable for estimating cooling loads for buildings located in the continental US?
 - A. 200sf/ton to 600sf/ton
 - B. 500sf/ton to 1,000sf/ton
 - C. 12,000sf/ton to 24,000sf/ton
 - D. 100sf/ton to 200sf/ton

6. Using the charts on the last page, what spacing would be appropriate for fluorescent 2x4 fixtures for a typical office space to where the owner desires to have 70fc?
 - A. 2'
 - B. 3'
 - C. 4'
 - D. 6'

7. Using the Charts on the last page, what would be the proper spacing for a 10' lobby to have 30fc using recessed incandescent can lights?
 - A. there is no 30fc
 - B. 4'
 - C. 13'
 - D. 8'

8. What test is typically done prior to sizing of a leaching field?
 - A. soil compaction test
 - B. fixture pressure test
 - C. water hardness test
 - D. percolation test

9. Liquified sewage that flows from a building's disposal system into a private on-site filtration system is called
 - A. Leach
 - B. Effluent
 - C. Soil
 - D. Scum

10. Which of the following statements about forced air heating systems is NOT true
 - A. Forced air heating systems can be augmented with humidification
 - B. Gas fired forced air heating excels at temperature modulation
 - C. Air pressure is measured is typically measured in inches of water
 - D. Forced air offers the lowest capacity of heat per unit volume

11. How many BTUs does it take to raise a cubic foot of water 5 degrees F? A cubic foot of water is 7.48 gallons. A cubic foot of water weighs 64 pounds.
 - A. 320 BTUs
 - B. 37.4 BTUs
 - C. 95.7 BTUs
 - D. 64 BTUs

12. Which of the following is NOT a type of electrical raceway?
 - A. EMT
 - B. IMC
 - C. Flexible Metal Conduit "Greenfield"
 - D. BX

13. Which of the following is a method for rating transmission of sound through doors?
 - A. IL
 - B. IIC
 - C. STC
 - D. NC

14. Enthalpy is
 - A. Heat that can be measured on a thermometer
 - B. Heat that cannot be measured on a thermometer
 - C. Latent heat
 - D. The sum of latent and sensible heat

