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Continuing Education Course #469
Electrical Power Distribution
Part 2 - Drawings, Symbols & Studies

1. Which industry agency or association publishes the National Electric Code?
- a. IEEE
- b. ANSI
- c. IEC
- d. NEMA
- e. NFPA

2. What is the significance of a single-line diagram?
- a. This type of drawing uses a single, continuous line to make the drawing
- b. This type of drawing uses one line between components even though there may be more than on conductor used to connect the equipment
- c. This is a simple drawing with little functional information
- d. This is an elementary drawing used in the beginning stages of project development

3. On a single-line diagram, what is the ANSI device number that represents a medium voltage AC circuit breaker?
- a. 25
- b. 52
- c. 1000
- d. 1

4. On a single-line diagram, what type of inputs will be shown for power meters and protective relays?
- a. Circuit breakers
- b. Voltage transformers
- c. Current transformers
- d. A and B
- e. B and C

5. What type of drawings would be used to identify on which floor of a 4 story-building a piece of equipment is located?
- a. Single-line diagram
- b. Three-line drawing
- c. Riser diagram
- d. Wiring diagram

6. What is the main function of schedules on an electrical drawing?
- a. Provide project shipment timing
- b. Provide tabular information
- c. Provide timing of relay protection
- d. None of the above

7. What is the main purpose of a short circuit study?

○ a. Determine the highest amount of current that will flow through the power distribution system under a short circuit fault condition.

○ b. Determine the shortest length of wire that can be used to complete a circuit

○ c. Determine how fast a circuit breaker will trip under a short circuit condition

○ d. Determine the shortest time to complete a project

8. What information is required to compete a short circuit study?

○ a. The utility available short circuit current

○ b. Service entrance transformer size, voltage rating, and impedance

○ c. Large motor loads

○ d. Cable sizes and lengths between power distribution equipment

○ e. Single-line diagram of the system

○ f. All of the above

9. Which of the following is not a purpose for an electrical coordination study?

○ a. To confirm that the protection settings will protect equipment from excessive damage

○ b. To determine the clearing time under fault conditions

○ c. Ensure that electrical conduits, water pipes, and steam pipes have proper clearance and coordination

○ d. To provide selectivity between upstream and downstream protective devices

10. What types of fault conditions an analyzed in an electrical coordination study?

○ a. Short circuit

○ b. Overload

○ c. Ground Fault

○ d. All of the above

11. Which type of electrical power study can be used to recommend the personal protective equipment that should be worn around electrical equipment?

○ a. Short circuit study

○ b. Coordination study

○ c. Arc Flash study

○ d. Load flow study

12. What code or standard should be used to recommend personal protective equipment to be worn around electrical equipment?

○ a. NFPA 70E

○ b. IEEE 519

○ c. ANSI 52

○ d. NEMA MG1

13. Which type of electrical power study will identify whether there are potential unacceptable voltage drops if the power system?

○ a. Short circuit study

○ b. Coordination study

○ c. Arc Flash study

○ d. Load flow study

14. What is the ANSI device number for an AC Time Overcurrent Relay?

○ a. 25

○ b. 32

○ c. 51
○ d. 52