

Name _____ Clas _____ Date _____
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Chapter 01 Commercial Building Plans and Specifications

1. Allowing metal shavings from drilling switchboard busing to fall onto energized parts of electrical equipment generally results in a(n) _____, which can cause deadly burns.

- a. lockout
- b. arc blast
- c. tagout
- d. pressure wave

ANSWER: b

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 2:32 AM

DATE MODIFIED: 7/26/2023 9:23 PM

2. The NEC[®] defines a(n) _____ as one who has skills and knowledge related to the construction and operation of electrical equipment and installations and has received safety training to recognize and avoid the hazards involved.

- a. qualified person
- b. engineer
- c. expert
- d. employee

ANSWER: a

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 2:39 AM

DATE MODIFIED: 7/7/2023 3:59 AM

3. On large electrical installations, an arc flash can generate temperatures of _____.

- a. 15,000°F (8,316°C)
- b. 25,000°F (13871°C)
- c. 35,000°F (19,427°C)

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d. 45,000°F (24982°C)

ANSWER: c

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:14 AM

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4. When turning a standard disconnect switch on, _____ of the switch.

- a. do not stand to the right
- b. do not stand to the left
- c. always stand in front
- d. do not stand directly in front

ANSWER: d

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:20 AM

DATE MODIFIED: 7/7/2023 3:21 AM

5. Which item in the general clauses and conditions is of value to the contractor and the estimator only?

- a. Proposal
- b. Schedule of drawings
- c. Agreement
- d. Notice to bidders

ANSWER: d

POINTS: 1

REFERENCES: Commercial Building Specifications

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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DATE CREATED: 7/7/2023 3:21 AM

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6. According to the supplementary general conditions, who is responsible for any utilities that are damaged?

- a. the municipal government
- b. the contractor
- c. the crew
- d. the site owner

ANSWER: b

POINTS: 1

REFERENCES: Commercial Building Specifications

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:22 AM

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7. The construction plans for a building are often called ____.

- a. shop drawings
- b. architectural
- c. blueprints
- d. plots

ANSWER: c

POINTS: 1

REFERENCES: Working Drawings

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:23 AM

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8. In the areas where ____ is enforced, the NEC[®] is the law.

- a. EWC
- b. COBR
- A

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- c. OSHA
- d. NFPA

ANSWER: c
POINTS: 1
REFERENCES: Codes and Organizations
QUESTION TYPE: Multiple Choice

HAS VARIABLES: False
DATE CREATED: 7/7/2023 3:26 AM
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9. Who may submit public input to change the NEC[®] (NFPA 70) based using the online public input process?
- a. anyone
 - b. a member of the Code-Making Panel
 - c. a professional engineer
 - d. a registered electrician

ANSWER: a
POINTS: 1
REFERENCES: Codes and Organizations
QUESTION TYPE: Multiple Choice

HAS VARIABLES: False
DATE CREATED: 7/7/2023 3:27 AM
DATE MODIFIED: 7/7/2023 4:00 AM

10. OSHA has recognized a number of organizations that meet the legal requirements in OSHA 29 CFR 1910.7. What is the industry acronym for these organizations?
- a. NRTL
 - b. USMC
 - A
 - c. QETL
 - d. NAFTA

ANSWER: a
POINTS: 1
REFERENCES: Term located under Qualified Electrical Testing Laboratories

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QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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11. The wording on a counterfeit UL logo might say “approved” instead of “_____.”
- a. SAFE
 - b. TESTED
 - c. OK
 - d. LISTED

ANSWER: d

POINTS: 1

REFERENCES: Defined Terms

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:28 AM

DATE MODIFIED: 7/7/2023 3:29 AM

12. The *ASHRAE Handbook* is considered the Bible of the _____ industry, much like the NEC[®] is to the electrical industry.
- a. heating, refrigerating, and air-conditioning
 - b. lighting
 - c. mechanical manufacturers
 - d. wire and cable

ANSWER: a

POINTS: 1

REFERENCES: Defined Terms

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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13. A ____ is when the dimensions of a product already designed and manufactured to the inch-pound system have their dimensions converted to metric dimensions.

- a. soft metric conversion
- b. soft metric measurement
- c. hard metric conversion
- d. hard metric measurement

ANSWER: a

POINTS: 1

REFERENCES: Metrics (SI) and the NEC

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:30 AM

DATE MODIFIED: 7/7/2023 3:31 AM

14. What is the metric designator for a raceway of trade size 3?

- a. 1
2
- b. 2
1
- c. 4
1
- d. 7
8

ANSWER: d

POINTS: 1

REFERENCES: Metrics (SI) and the NEC

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:31 AM

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15. In the metric system, what is the prefix for 1000?

- a. centi-
- b. kilo-
- c. mega
-

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d. giga-

ANSWER: b

POINTS: 1

REFERENCES: Metrics (SI) and the NEC

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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16. How can one become qualified to work on or near exposed energized equipment?

ANSWER: Only qualified persons are permitted to work on or near exposed energized equipment. To become qualified, a person must:

- have the skill and technique necessary to distinguish exposed live parts from other parts of electrical equipment.
- be able to determine the voltage of exposed live parts and be trained in the use of special precautionary techniques, such as personal protective equipment, insulations, shielding material, and insulated tools.
- be trained in the use of special precautionary techniques, such as personal protective equipment, insulations, shielding material, and insulated tools.

POINTS: 1

REFERENCES Safety in the Workplace

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QUESTION TY Essay

PE:

HAS VARIABL False

ES:

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RY MODE:

DATE CREATE 7/7/2023 3:33 AM

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D:

17. In the general clauses and conditions of a building specification, what does the “Instructions to Bidders” section encompass?

ANSWER: This section provides the contractor with a brief description of the project, its location, and how the job is to be bid (lump sum, one contract, or separate

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contracts for the various construction trades, such as plumbing, heating, electrical, and general). In addition, bidders are told where and how the plans and specifications can be obtained prior to the preparation of the bid, how to make out the proposal form, where and when to deliver the proposal, the amount of any bid deposits required, any performance bonds required, and bidders' qualifications. Other specific instructions may be given, depending on the particular job.

POINTS: 1

REFERENCES Commercial Building Specifications

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QUESTION TY Essay

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18. What does the appropriate section of the NEC[®] state about submitting plans?

ANSWER: In most communities, building plans and specifications must be submitted to the building department for review prior to the issuance of a construction permit. NEC 215.5 states, if required by the authority having jurisdiction, a diagram showing feeder details shall be provided prior to the installation of the feeders. Such a diagram shall show the area in square feet of the building or other structure supplied by each feeder, the total calculated load before applying demand factors, the demand factors used, the calculated load after applying demand factors, and the size and type of conductors to be used.

POINTS: 1

REFERENCES Working Drawings

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QUESTION TY Essay

PE:

HAS VARIABLE False

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19. How is the term “LABELED” different from “IDENTIFIED” as used in the NEC®?

ANSWER: IDENTIFIED (as applied to equipment): Recognizable as suitable for the specific purpose, functions, use, environment, application, and so forth, where described in a particular Code requirement.
LABELED: Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by who's labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

POINTS: 1

REFERENCES Defined Terms

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QUESTION TY Essay

PE:

HAS VARIABL False

ES:

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RY MODE:

DATE CREATE 7/7/2023 3:38 AM

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DATE MODIFIE 7/7/2023 3:58 AM

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20. How are commas, periods, and spaces used to make long numbers easier to read?

ANSWER: In the United States, it is the practice to use a period as the decimal marker and a comma to separate a string of numbers into groups of three for easier reading. In many countries, the comma has been used in lieu of the decimal marker, and spaces are left to separate a string of numbers into groups of three. The SI system, taking something from both, uses the period as the decimal marker and the space to separate a string of numbers into groups of three, starting from the decimal point and counting in either direction. An example is 12 345.789 99. An exception to this is when there are four numbers on either side of the decimal point. In this case, the third and fourth numbers from the decimal point are not separated, e.g., 2015.1415.

POINTS: 1

REFERENCES Metrics (SI) and the NEC

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QUESTION TY Essay

PE:

HAS VARIABL False

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D:

21. OSHA has recognized a number of organizations that meet the legal requirements in OSHA 29 CFR 1910.7. What is the OSHA and industry acronym for these organizations?

- a. NRTL
- b. USMC
- A
- c. QETL
- d. NAFTA

ANSWER: a

POINTS: 1

REFERENCES: Term located under Qualified Electrical Testing Laboratories

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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DATE MODIFIED: 7/7/2023 3:41 AM

22. Pressures developed during an arc blast can be as high as _____ pounds per square foot.

- a. 158
- 0
- b. 316
- 0
- c. 216
- 0
- d. 202
- 0

ANSWER: c

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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23. NFPA 70E outlines ___ steps in Section 120.5 to ensure the equipment is in a safe working condition.

- a. five
- b. six
- c. seven
- d. eight

ANSWER: d

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

DATE CREATED: 7/7/2023 3:43 AM

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24. The amount of heat in an arc flash will instantly vaporize copper and expand it _____ times its original volume.

- a. 74,000
- b. 64,000
- c. 54,000
- d. 44,000

ANSWER: b

POINTS: 1

REFERENCES: Safety in the Workplace

QUESTION TYPE: Multiple Choice

HAS VARIABLES: False

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25. Provide a brief explanation about the requirements for warning or hazard labels that are applied to electrical equipment in the field.

ANSWER: Section 110.21(B) provides requirements for warning or hazard labels that are applied in the field. It includes requirements to adequately warn of the hazard using effective words, colors, or symbols. The warning label must also be permanently affixed to the equipment and is not permitted to be handwritten, except for filling in a blank for variable information or could be subject to changes. The label must be of sufficient durability to withstand the environment where located.

POINTS: 1

REFERENCES Safety in the Workplace

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QUESTION TY Essay

PE:

HAS VARIABL False

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