

Chapter 01 General Information for Electrical Installations

1. The open-circuit voltage between the two terminals of a single-pole switch on a lighting circuit when the switch is in the OFF position is ____.

- a. Zero
- b. 60 volts
- c. 120 volts
- d. 240 volts

ANSWER:

c

2. Working on equipment with the power turned on can result in burns, serious injury or ____.

- a. death
- b. an outage
- c. a short circuit
- d. all of the above

ANSWER:

a

3. Working on electrical equipment requires insulated shoes, face shields and ____.

- a. rubber gloves
- b. good light
- c. no disturbance
- d. all of the above

ANSWER:

a

4. For the most part, the safest practice includes tagging, locking the disconnecting, and ____.

- a. turning power off
- b. getting briefing
- c. having a helper
- d. all of the above

ANSWER:

a

5. The harmful component of an electrical circuit is ____.

- a. Voltage
- b. Current
- c. Body resistance
- d. Moisture

ANSWER:

b

6. Many organizations, trade organizations, manufacturers, and others offer training on the NEC and electrical safety. Among them are National Electrical Contractors (NECA.ORG), Underwriters Laboratory (UL.COM) and ____.

ANSWER: The International Association of Electrical Inspectors (IAEI.COM)

7. Many government organizations offer publications and useful information on electrical safety. Among them CDC.GOV, Dept. of Energy, and ____.

ANSWER: OSHA.GOV

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8. OSHA Training Institute offers outreach training programs of interest to electricians, contractors, and instructors. The basic safety courses for general construction safety and health are the OSHA _____ and OSHA _____ courses. (see OSHA.GOV)

- a. 10 hour, 30 hour
- b. 2 hour, 4 hour
- c. 6 hour, 8 hour
- d. all of the above

ANSWER:

a

9. The Electrical Safety Foundation International (ESFI) (<http://www.electrical-safety.org>) offers mostly free material, simple-to-understand electrical safety material, and _____.

ANSWER: some downloadable material

10. The NEC is published by the National Fire Protection Association. To remain as up-to-date as possible, it is revised every _____.

- a. 2 years
- b. 3 years
- c. 4 years
- d. all of the above

ANSWER:

d

11. NEC has been adopted in all 50 states as the basis for electrical systems. However, each state can develop their own special version, make amendments to the document, and _____.

ANSWER: adopt older editions

12. NEC Article 90 says, in part: This Code is not intended as a _____ or an _____ for untrained persons.

- a. design specification, instruction manual
- b. how-to book, introductory
- c. workbook, informational reference
- d. all of the above

ANSWER:

a

13. The NEC also states, in Article 90: Compliance therewith and proper maintenance result in an installation that is essentially free from hazard but not necessarily adequate for good service or future expansion of electrical use or _____.

- a. efficient and convenient
- b. easy and guaranteed
- c. sufficient and safe
- d. all of the above

ANSWER:

a

14. In addition to states, local municipalities or even inspection agencies can make _____ or _____ to the national code.

- a. local amendments, changes
- b. local suggestions, subtractions

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- c. language changes, dimension changes
- d. all of the above

ANSWER:

a

15. The NEC is divided into an introduction and nine chapters. Wiring of _____ is mostly covered in Chapters 1, 2, 3, and 4, which apply generally.

- a. commercial buildings
- b. spas and hot tubs
- c. special equipment
- d. dwellings

ANSWER:

d

16. _____ apply(ies) to special occupancies, special equipment, or other special conditions and may supplement or modify this or earlier Chapters.

- a. Chapters 2, 3, 4
- b. Chapter 9
- c. Chapters 5, 6, 7
- d. all of the above

ANSWER:

c

17. The NEC is full of requirements that are safety related. Another is NFPA 70E Electrical Safety in the Workplace. NFPA 70E _____.

- a. is voluntary
- b. is endorsed by OSHA
- c. can be substituted for the NEC

ANSWER:

a

18. According to NFPA 70E, circuits and conductors are not considered to be safe to work on until _____ places them in an electrically safe condition.

- a. the boss
- b. a law enforcement officer
- c. a qualified person
- d. a project leader

ANSWER:

c

19. The U.S. Department of Labor Occupational Safety and Health Administration (OSHA) regulations are the law when it comes to safety in the workplace. Key topics in the standard include wiring methods, hazardous (classified) locations, and _____.

ANSWER:

wiring design and protection

20. OSHA 1910.399 defines a qualified person as “One who has received training in and has demonstrated skills and knowledge in the _____ of electric equipment and installations and the hazards involved.”

- a. installation
- b. construction and operation

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- c. maintenance
- d. all of the above

ANSWER:

b

21. OSHA offers safety courses referring to personal protective equipment (PPE). These include such items as _____.

- a. ear protection
- b. fireproof hats
- c. face plates
- d. all of the above

ANSWER:

a

22. Several communities, counties, and/or states require electricians and electrical contractors to be licensed. Minimum qualifications might include _____.

- a. education
- b. advanced training
- c. employment
- d. all of the above

ANSWER:

a

23. To maintain a valid license, many licensing agencies require _____.

- a. working for another licensee
- b. union membership
- c. continuing education
- d. all of the above

ANSWER:

c

24. Quite often, a community will have a "Residential Only" license, limiting activity to _____.

- a. low voltage
- b. signal circuits
- c. lighting branches
- d. house wiring

ANSWER:

d

25. Permits are a means for a community to permanently _____ to be done and _____.

- a. record electrical work, who is doing the work
- b. homeowner
- c. accept fees
- d. all of the above

ANSWER:

a

26. Usually for electrical projects, permits must be issued _____.

- a. after starting the job

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- b. during the job
- c. prior to starting the job
- d. anytime during the job

ANSWER:

c

27. Electrical inspectors are usually up to date on NEC and local rules, and may correct the electrician. For any corrections that must be done, inspectors should always give a reference _____.

- a. verbally
- b. preferably in writing
- c. by telephone
- d. in person

ANSWER:

b

28. Electrical inspectors are the authority having jurisdiction in most cases. That means they _____.

- a. interpret Code rules
- b. enforce OSHA rules
- c. require changes to completed work
- d. all of the above

ANSWER:

a

29. Electrical inspectors are not fallible. They may be part-time or also have the responsibility for _____.

- a. plumbing
- b. energy conservation
- c. other areas
- d. all of the above

ANSWER:

c

30. The International Association of Electrical Inspectors (IAEI) is a nonprofit organization. Membership includes _____.

- a. electrical inspectors
- b. handymen
- c. trainees
- d. all of the above

ANSWER:

a

31. A major goal and activity of the IAEI is to _____.

- a. improve the understanding of the NEC
- b. review jobs
- c. approve permits
- d. all of the above

ANSWER:

a

32. All measurements in the NEC are shown in both inch-pound (imperial measurements) and metric values where
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applicable. Many dimensions are not affected. Some _____.

ANSWER: _____ will not change

33. In the international system of units, the prefix kilo- means _____.

- a. hundred
- b. thousand
- c. million
- d. billion

ANSWER: _____ b

34. In the international system of units, the prefix milli- means _____.

- a. one hundredth
- b. one thousandth
- c. one millionth
- d. one billionth

ANSWER: _____ b

35. The NEC in 90.9(C)(1) states that where the actual measured size of a product is not the same as the nominal size, the _____ shall be used rather than dimensions.

- a. metric size
- b. next larger size
- c. nearest size
- d. trade size designator

ANSWER: _____ d

36. The term Nationally Recognized Testing Laboratories (NRTL) is used by the Occupational Safety and Health Administration and is used to classify and recognize qualified electrical product testing laboratories. A NRTL _____, the product is then “listed” to have a listing mark.

ANSWER: _____ performs tests on a product

37. Be on the lookout for counterfeit electrical products. These products have not been tested and certified by a recognized testing laboratory. They can be a hazard to life and property. Counterfeit electrical products might also be referred to as _____.

ANSWER: _____ black market products

38. Do not confuse a UL marking in a circle with the markings found on recognized components. Recognized components are intended components of a _____.

ANSWER: _____ finished product

39. UL previously produced several directories including Electrical Construction Equipment Directory (Green Book). The information previously provided is now located in UL’s online database, located at _____.

ANSWER: _____ www.ul.com/apps/product-iq

40. The primary function of Nationally Recognized Testing Laboratories (NRTL) is to test and evaluate products for _____.

Name _____ Class _____ Date _____
: _____ : _____ e: _____

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ANSWER:

safety