

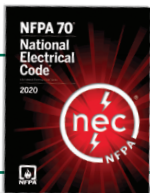
ARTICLE 90

INTRODUCTION TO THE *NATIONAL ELECTRICAL CODE*

Introduction to Article 90—Introduction to the *National Electrical Code*

Article 90 opens by saying the *National Electrical Code (NEC/Code)* is not intended as a design specification or instruction manual. It has one purpose only, and that is the “practical safeguarding of persons and property from hazards arising from the use of electricity.” That does not necessarily mean the installation will be efficient, convenient, or able to accommodate future expansion; just safe. The necessity of carefully studying the *Code* rules cannot be overemphasized. Understanding where to find the requirements in the *NEC* that apply to the installation is invaluable. Rules in several different articles often apply to even a simple installation. Article 90 then goes on to describe the scope and arrangement of the *NEC*. The balance of it provides the reader with information essential to understanding the *Code* rules.

You are not going to remember every section of every article of the *Code* but, hopefully, you will come away with knowing where to look after studying Mike Holt’s *Understanding the National Electrical Code, Volume 1* textbook, and practicing with this workbook.



Please use the 2020 *Code* book to answer the following questions.

- The *NEC* is _____.
 - intended to be a design manual
 - meant to be used as an instruction guide for untrained persons
 - for the practical safeguarding of persons and property
 - published by the Bureau of Standards
- Compliance with the *Code* and proper maintenance result in an installation that is essentially _____.
 - free from hazards
 - not efficient or convenient
 - not adequate for good service or future expansion
 - all of these
- Compliance with the provisions of the *NEC* will result in _____.
 - good electrical service
 - an efficient electrical system
 - an electrical system essentially free from hazard
 - all of these
- The *Code* contains provisions considered necessary for safety, which will not necessarily result in _____.
 - efficient use
 - convenience
 - good service or future expansion of electrical use
 - all of these

5. Electrical hazards often occur because the initial _____ did not provide for increases in the use of electricity and therefore wiring systems become overloaded.
 - (a) inspection
 - (b) owner
 - (c) wiring
 - (d) builder
6. Hazards often occur because of _____.
 - (a) overloading of wiring systems by methods or usage not in conformity with the *NEC*
 - (b) initial wiring not providing for increases in the use of electricity
 - (c) manufacturing defects
 - (d) overloading of wiring systems by methods or usage not in conformity with the *NEC* and initial wiring not providing for increases in the use of electricity
7. Which of the following systems shall be installed and removed in accordance with the *NEC* requirements?
 - (a) Signaling conductors, equipment, and raceways.
 - (b) Communications conductors, equipment, and raceways.
 - (c) Electrical conductors, equipment, and raceways.
 - (d) all of these
8. The *NEC* applies to the installation of _____.
 - (a) electrical conductors and equipment within or on public and private buildings
 - (b) signaling and communication conductors
 - (c) optical fiber cables
 - (d) all of these
9. This *Code* covers the installation of _____ for public and private premises, including buildings, structures, mobile homes, recreational vehicles, and floating buildings.
 - (a) optical fiber cables
 - (b) electrical equipment
 - (c) raceways
 - (d) all of these
10. Installations supplying _____ power to ships and watercraft in marinas and boatyards are covered by the *NEC*.
 - (a) shore
 - (b) primary
 - (c) secondary
 - (d) auxiliary
11. Installations used to export electric power from vehicles to premises wiring or for _____ current flow are covered by the *NEC*.
 - (a) emergency
 - (b) primary
 - (c) bidirectional
 - (d) secondary
12. The *NEC* does apply to installations in _____.
 - (a) floating buildings
 - (b) mobile homes
 - (c) recreational vehicles
 - (d) all of these
13. The *NEC* does not cover electrical installations in ships, watercraft, railway rolling stock, aircraft, or automotive vehicles.
 - (a) True
 - (b) False
14. The *Code* covers underground mine installations and self-propelled mobile surface mining machinery and its attendant electrical trailing cable.
 - (a) True
 - (b) False
15. The *Code* does not cover installations under the exclusive control of an electrical utility such as _____.
 - (a) service drops and laterals
 - (b) electric utility office buildings
 - (c) electric utility warehouses
 - (d) electric utility garages
16. Installations of communications equipment that are under the exclusive control of communications utilities and located outdoors or in building spaces used exclusively for such installations _____ covered by the *NEC*.
 - (a) are
 - (b) are sometimes
 - (c) are not
 - (d) may be
17. Chapters 1 through 4 of the *NEC* apply _____.
 - (a) generally to all electrical installations
 - (b) only to special occupancies and conditions
 - (c) only to special equipment and material
 - (d) all of these

18. Chapters 5, 6, and 7 apply to special occupancies, special equipment, or other special conditions and may supplement or modify the requirements in Chapters 1 through 7.
 - (a) True
 - (b) False
19. Chapters 5, 6, and 7 of the *NEC* apply to _____.
 - (a) special occupancies
 - (b) special equipment
 - (c) special conditions
 - (d) all of these
20. Communications wiring such as telephone, antenna, and CATV wiring within a building shall not be required to comply with the installation requirements of Chapters 1 through 7, except where specifically referenced in Chapter 8.
 - (a) True
 - (b) False
21. Installations shall comply with the material located in the *NEC* Annexes because they are part of the requirements of the *Code*.
 - (a) True
 - (b) False
22. The _____ has the responsibility for deciding on the approval of equipment and materials.
 - (a) manufacturer
 - (b) authority having jurisdiction
 - (c) testing agency
 - (d) the owner of the premises
23. The authority having jurisdiction has the responsibility for _____.
 - (a) making interpretations of rules
 - (b) deciding upon the approval of equipment and materials
 - (c) waiving specific requirements in the *Code* and permitting alternate methods and material if safety is maintained
 - (d) all of these
24. If the *NEC* requires new products that are not yet available at the time a new edition is adopted, the _____ may permit the use of the products that comply with the most recent previous edition of the *Code* adopted by that jurisdiction.
 - (a) electrical engineer
 - (b) master electrician
 - (c) authority having jurisdiction
 - (d) permit holder
25. In the *NEC*, the word(s) “_____” indicate a mandatory requirement.
 - (a) shall
 - (b) shall not
 - (c) shall be permitted
 - (d) shall or shall not
26. When the *Code* uses “_____,” it means the identified actions are allowed but not required, and they may be options or alternative methods.
 - (a) shall
 - (b) shall not
 - (c) shall be permitted
 - (d) shall or shall not
27. Explanatory material, such as references to other standards, references to related sections of the *NEC*, or information related to a *Code* rule, are included in the form of Informational Notes.
 - (a) True
 - (b) False
28. Nonmandatory Informative Annexes contained in the back of the *Code* book are _____.
 - (a) for information only
 - (b) not enforceable as a requirement of the *Code*
 - (c) enforceable as a requirement of the *Code*
 - (d) for information only and not enforceable as a requirement of the *Code*
29. It is the intent of the *NEC* that factory-installed _____ wiring of listed equipment need not be inspected at the time of installation of the equipment, except to detect alterations or damage.
 - (a) external
 - (b) associated
 - (c) internal
 - (d) all of these
30. Factory-installed _____ wiring of listed equipment need not be inspected at the time of installation of the equipment, except to detect alterations or damage.
 - (a) external
 - (b) associated
 - (c) internal
 - (d) all of these