Instructions: **Fee $35**

1. Print these pages.
2. Circle the correct answers and transfer them to the answer sheet.
3. Page down to the last page for the verification forms and mailing instructions.
4. Use the 2011 NEC code book or this language (click here) & compare it to the 2008 NEC code.

Course: 12146 2011 NEC CODE UPDATES PART 2

This course is valid for these credentials:

Credential Description	Cred Code	Credit Hours
Registered - Beginner Electrician	BE	4.0
Commercial Electrical Inspector	CEI	4.0
Industrial Journeyman Electrician	IJE	4.0
Journeyman Electrician	JE	4.0
Master Electrician	ME	4.0
Residential Journeyman Electrician	RJE	4.0
Residential Master Electrician	RME	4.0
UDC-Electrical Inspector	UEI	4.0

2011 NEC Code Updates Part 2

1. 240.15 Revisions were made to the requirements for circuit breakers used as overcurrent devices and for the use of identified handle ties including the three pole handle ties.
   a. true
   b. false

---

2. 240.15 Individual single-pole circuit breakers, with recognized handle ties, shall be permitted as the protection for each grounded conductor of multiwire branch circuits that serve only single-phase line-to-line loads.
   a. true
   b. false

---

3. 240.15 Circuit breakers shall open all ungrounded conductors of the circuit both _____ unless otherwise permitted in 240.15(B)(1), (B)(2), (B}{3), and (B)(4).
   a. manually
   b. automatically
   c. none of the above
   d. both a & b

---

4. 240.24 In dwelling units, dormitories, and guest rooms or guest suites, overcurrent devices, other than supplementary overcurrent protection, shall not be located in_____.
   a. bathrooms
   b. bedroom
   c. laundry room
   d. all of the above

---

5. 240.87 Where a circuit breaker is utilized without an instantaneous trip, documentation shall be available to those authorized to design, install, operate or inspect the installation as

to the location of the circuit breaker(s). Where a circuit breaker is utilized without an instantaneous trip, one of the following or approved equivalent means shall be provided:

a. Zone-selective interlocking
b. Differential relaying
c. Energy-reducing maintenance switching with local status indicator
d. all of the above

---

6. 240.91 New provisions were added for limited "round up" conductor protection with overcurrent devices rated over 800 amperes in _____ installations.

a. supervised multifamily
b. supervised industrial
c. supervised commercial
d. all of the above

---

7. 240.91 Devices Rated over 800 Amperes. Where the overcurrent device is rated over 800 amperes, the ampacity of the conductors it protects shall be equal to or greater than 95% of the rating of the overcurrent device specified in 240.6 in accordance with _____.

a. the conductors are protected within recognized time vs. current limits for short-circuit currents
b. all equipment in which the conductors terminate is listed and marked for the application.
c. both a & b
d. neither a or b

---

8. New definition for supply side bonding jumper was added to _____.

a. 250.1
b. 250.3
c. 250.4
d. 250.2

---

9. 250.2 A conductor installed _____, that ensures the required electrical conductivity between metal parts required to be electrically connected.

a. on the supply side of a service
b. within a service equipment enclosure(s)
c. for a separately derived system
d. all of the above

---

10. 250.21 Ungrounded systems shall be legibly marked "Ungrounded System" at the _____ of the system.

a. source
b. first disconnecting means
c. both a or b
d. neither a or b

---

11. 250.21 The marking shall be of sufficient durability to withstand the environment involved.

a. true
b. false

---

12. 250.24(C) The term phase conductor(s) has been properly changed to either _____ to give a more accurate description of the conductor(s) the application of these rules is intended for.

a. ungrounded conductor(s)
b. grounded conductor(s)
c. neither a or b
d. both a or b

---

13. The term equipment bonding jumper was changed to supply-side bonding jumper at 250.30(A)(2), as this was necessary to ensure the proper _____ of bonding conductors installed within or on the supply side of service equipment and between the source of a separately derived system and the first disconnecting means.

a. identification
b. installation
c. neither a or b
d. both a & b

---

14. 250.30 If the source of the separately derived system is located _____ the building or structure supplied, a grounding electrode connection shall be made at the source location to one or more grounding electrodes in compliance with 250.50.

a. on
b. inside
c. outside
d. all of the above

---

15. 250.32 Supplied by a Feeder or Branch Circuit. An equipment grounding conductor as described in 250.118 shall be run with the supply conductors and be connected to the _____ disconnecting means and to the grounding electrode(s).

a. building
b. structure
c. neither a or b
d. both a & b

---

16. 250.32 The equipment grounding conductor shall be used for _____ of equipment, structures, or frames required to be grounded or bonded.

a. grounding
b. bonding
c. neither a or b
d. both a & b

---

17. 250.32 The equipment grounding conductor shall be sized in accordance with 250.122.

a. true
b. false

---

18. 250.32 Any installed grounded conductor shall be connected to the equipment grounding conductor or to the grounding electrode(s).

a. true
b. false

---

19. 250.32 Exception: For installations made in compliance with previous editions of this Code that permitted such connection, the grounded conductor run with the supply to the building or structure shall be permitted to serve as the ground-fault return path if all of the following requirements continue to be met:

a. An equipment grounding conductor is not run with the supply to the building or structure.
b. There are no continuous metallic paths bonded to the grounding system in each building or structure involved.
c. Ground-fault protection of equipment has not been installed on the supply side of the feeders.
d. all of the above

---

20. 250.32 If the grounded conductor is used for grounding in accordance with the provision of this exception, the size of the grounded conductor shall not be smaller than the larger of:

a. That required by 220.61
b. That required by 250.122
c. neither a or b
d. both a & b

---

21. 250.52 Supplied By Separately Derived System. Where a building or structure is supplied from a separately derived system, the separate equipment or bonding conductor shall be in accordance with 250.30(B).

a. true
b. false

---

22. 250.52 A metal underground water pipe in direct contact with the earth for _____or more including any metal well casing bonded to the pipe and electrically continuous or made electrically continuous by bonding around insulating joints or insulating pipe to the points of connection of the grounding electrode conductor and the bonding conductors or jumper(s), if installed.

a. 3.0 m
b. 10 ft
c. neither a or b
d. both a & b

---

23. 250.52 Electrodes Permitted for Grounding (2) Metal Frame of the Building or Structure. The metal frame of the building or structure that is connected to the earth by one or more of the following methods:

a. At least one structural metal member that is in direct contact with the earth for 3.0 m (10 ft) or more, with or without concrete encasement.
b. The hold-down bolts securing the structural steel column that are connected to a concrete-encased electrode that complies with 250.52(A)(3) and is located in the support footing or foundation. The hold-down bolts shall be connected to the concrete-encased electrode by welding, exothermic welding, the usual steel tie wires, or other approved means.
c. neither a or b
d. both a & b

---

24. 250.52 A concrete-encased electrode shall consist of at least 6.0 m (20 ft) of either:

a. One or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than 13 mm (1/2 in.) in diameter, installed in one continuous 6.0-m (20-ft) length.
b. Bare copper conductor not smaller than 4 AWG shall be encased by at least 50 mm (2 in.) of concrete and shall be located horizontally within that portion of a concrete foundation or footing that is in direct contact with the earth or within vertical foundations or structural components or members that are in direct contact with the earth.
c. neither a or b
d. both a & b

---

25. 250.52 Multiple pieces of reinforcing bars or rods are connected together by the usual _____ to create a 6.0-m (20-ft) or greater length.
a. steel tie wires
b. exothermic welding
c. welding
d. all of the above

---

26. 250.52 If multiple concrete-encased electrodes are present at a building or structure , all of the encased electrodes must be bonded into the grounding electrode system.
a. true
b. false

---

27. 250.52 Concrete installed with _____ separating the concrete from the earth is not considered to be in "direct contact" with the earth.
a. insulation
b vapor barriers
c. films or similar items
d. all of the above

---

28. 250.53 Rod, pipe, and plate grounding electrodes are now required to be supplemented by an additional electrode.
a. true
b. false

---

29. 250.53 Rod, pipe and plate electrodes shall meet the following requirements:
a. Below Permanent Moisture Level. If practicable, rod, pipe, and plate electrodes shall be embedded below permanent moisture level. Rod, pipe, and plate electrodes shall be free from nonconductive coatings such as paint or enamel.
b. Supplemental Electrode Required. A single rod, pipe or plate electrode shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)(8).
c. Supplemental Electrode. If multiple rod, pipe, or plate electrodes are installed to meet the requirements of this section, they shall not be less than 1.8 m (6 ft) apart.
d. all of the above

---

30. 250.53 The supplemental electrode shall be permitted to be bonded to one of the following:
a. The rod, pipe or plate electrode

b. The grounding electrode conductor
c. The grounded service-entrance conductor
d. all of the above

---

31. 250.53 Rod, pipe, and plate electrodes shall be coated with nonconductive coatings.
a. true
b. false

---

32. 250.53 The supplemental electrode shall be permitted to be bonded to one of the following:
a. The nonflexible grounded service raceway
b. Any grounded service enclosure
c. neither a or b
d. both a & b

---

33. 250.53 If multiple rod, pipe, or plate electrodes are installed to meet the requirements of this section, they shall not be less than ____ apart. (Previously located at 250.56)
a. 1.8 m
b. 6 ft
c. neither a or b
d. both a & b

---

34. 250.53 If a single rod, pipe, or plate grounding electrode has a resistance to earth of ___ ohms or less, the supplemental electrode shall not be required. (Previously located at 250.56)
a. 10
b. 25
c. neither a or b
d. both a & b

---

35. 250.53 The paralleling efficiency of rods is increased by spacing them twice the length of the _____ rod. (Previously located at 250.56)
a. shortest
b. longest
c. neither a or b
d. both a & b

---

36. 250.64 Grounding electrode conductors are permitted to be _____ framing members when installed exposed.
a. secured to
b. routed through
c. neither a or b
d. both a & b

---

37. 250.64 Where exposed, a grounding electrode conductor or its enclosure shall be securely fastened to the surface on which it is carried.
a. true
b. false

---

38. 250.64 A ___ AWG or larger copper or aluminum grounding electrode conductor shall be protected if exposed to physical damage.

a. 4
b. 6
c. neither a or b
d. both a & b

---

39. 250.64 A ___ AWG grounding electrode conductor that is free from exposure to physical damage shall be permitted to be run along the surface of the building construction without metal covering or protection if it is securely fastened to the construction.

a. 4
b. 6
c. neither a or b
d. both a & b

---

40. 250.64 If a 6 AWG grounding electrode conductor is exposure to physical damage then it shall be protected in _____.

a. rigid metal conduit (RMC)
b. intermediate metal conduit (IMC)
c. rigid polyvinyl chloride conduit (PVC)
d. all of the above

---

41. 250.64 If a 6 AWG grounding electrode conductor is exposure to physical damage then it shall be protected in _____.

a. reinforced thermosetting resin conduit (RTRC)
b. electrical metallic tubing (EMT)
c. cable armor
d. all of the above

---

42. 250.64 Grounding electrode conductors smaller than ____ AWG shall be protected in RMC, IMC, PVC, RTRC, EMT, or cable armor.

a. 8
b. 6
c. neither a or b
d. both a & b

---

43. 250.64 A common grounding electrode conductor and associated tap conductors are now permitted to be connected at an approved busbar.

a. true
b. false

---

44. 250.64 A grounding electrode conductor tap shall extend to the _____ of each service disconnecting means enclosure.

a. inside
b. surface
c. neither a or b
d. both a & b

---

45. 250.64 The tap conductors shall be connected to the common grounding electrode conductor by one of the following methods in such a manner that the common grounding electrode conductor remains without a splice or joint:

a. exothermic welding
b. connectors listed as grounding and bonding equipment
c. connections to an aluminum or copper busbar not less than ¼" x 2".
d. all of the above

---

46. 250.64 When using a busbar for a grounding electrode conductor tap, the busbar shall be securely _____ and shall be installed in an accessible location.

a. fastened
b. attached
c. neither a or b
d. both a & b

---

47. 250.64 When using a busbar for a grounding electrode conductor tap, the connections shall be made by a _____.

a. listed connector
b. exothermic welding process
c. neither a or b
d. both a & b

---

48. 250.68 The structural metal frame of a building that is directly connected to a grounding electrode as specified _____ shall be permitted as a bonding conductor to interconnect electrodes that are part of the grounding electrode system, or as a grounding electrode conductor.

a. By connecting the structural metal frame to the reinforcing bars of a concrete-encased electrode as provided in 250.52(A)(3} or ground ring as provided in 250.52(A){4) [Relocated from 250.52(A)(2)(2)j
b. By bonding the structural metal frame to one or more of the grounding electrodes as specified in 250.52(A} (5) or (A)(7) that comply with 250.53(A)(2) [Relocated from 250.52(A}(2)(3)]
c. By other approved means of establishing a connection to earth [Relocated from 250.52(A)(2)(4)]
d. all of the above

---

49. 250.68 Metallic Water Pipe and Structural Metal. Grounding electrode conductors and bonding jumpers shall be permitted to be connected at the following locations and be used to extend the connection to an electrode(s):

a. Interior metal water piping located not more than 1.52 m (5 ft) from the point of entrance to the building shall be permitted to be used as a conductor to interconnect electrodes that are part of the grounding electrode system. [Relocated from 250.52(A)(1)]
b. a metallic phone line
c. neither a or b
d. both a & b

---

50. 250.68 Metallic Water Pipe and Structural Metal. Exception: In _____buildings or structures, if conditions of maintenance and supervision ensure that only qualified persons

service the installation, interior metal water piping located more than 1.52 m (5 ft) from the point of entrance to the building shall be permitted as a bonding conductor to interconnect electrodes that are part of the grounding electrode system.

a. industrial
b. commercial
c. institutional
d. all of the above

---

51. 250.92 Per their listing, reducing washers may be installed in enclosures provided with concentric or eccentric knockouts, only after all of the concentric and eccentric rings have been removed, unless the enclosures containing concentric and eccentric knockouts have been listed for bonding purposes.

a. true
b. false

---

52. 250.92 Bonding jumpers meeting the requirements of this article shall be used around impaired connections such as reducing washers or oversized, concentric, or eccentric knockouts. Standard locknuts or bushings shall not be the only means for the bonding required by this section but shall be permitted to be installed to make a mechanical connection of the raceway(s). Electrical continuity at service equipment, service raceways, and service conductor enclosures shall be ensured by one of the following methods:

a. Bonding equipment to the grounded service conductor in a manner provided in 250.8
b. Connections utilizing threaded couplings or threaded hubs on enclosures if made up wrenchtight.
c. neither a & b
d. both a & b

---

53. 250.92 Bonding jumpers meeting the requirements of this article shall be used around impaired connections such as reducing washers or oversized, concentric, or eccentric knockouts. Standard locknuts or bushings shall not be the only means for the bonding required by this section but shall be permitted to be installed to make a mechanical connection of the raceway(s). Electrical continuity at service equipment, service raceways, and service conductor enclosures shall be ensured by one of the following methods:

a. Threadless couplings and connectors if made up tight for metal raceways and metal-clad cables
b. Other listed devices, such as bonding-type locknuts, bushings, or bushings with bonding jumpers
c. none of the above
d. both a & b

---

54. 250.102 Supply-side bonding jumper is defined as:

a. a conductor installed on the supply side of a service
b. within a service equipment enclosure(s)
c. for a separately derived system, that ensures the required electrical conductivity between metal parts required to be electrically connected.
d. all of the above

---

55. 250.102 Sizing requirements for supply-side bonding jumpers have been revised and

converted into a list format.

a. true
b. false

---

56. 250.102 Size for Parallel Conductor Installations. Where the ungrounded supply conductors are paralleled in two or more raceways or cables, and an individual supply-side bonding jumper is used for bonding these raceways or cables, the size of the supply-side bonding jumper for each raceway or cable shall be selected from Table _____ based on the size of the ungrounded supply conductors in each raceway or cable. A single supply-side bonding jumper installed for bonding two or more raceways or cables shall be sized in accordance with (C)(1).

a. 250.67
b. 250.66
c. none of the above
d. both a & b

---

57. 250.102 Different materials. Where the ungrounded supply conductors and the supply-side bonding jumper are of different materials (copper or aluminum), the minimum size of the supply-side bonding jumper shall be based on the assumed use of ungrounded conductors of the same material as the supply-side bonding jumper and with an ampacity equivalent to that of the installed _____ conductors.

a. grounded supply
b. ungrounded return
c. ungrounded supply
d. none of the above

---

58. 250.102 Size for Supply Conductors in a Single Raceway or Cable. The supply-side bonding jumper shall not be smaller than the sizes shown in Table 250.66 for grounding electrode conductors. If the _____ conductors are larger than 1100 kcmil copper or 1750 kcmil aluminum, the supply-side bonding jumper shall have an area not less than 12/r percent of the area of the largest set of ungrounded supply conductors.

a. grounded supply
b. ungrounded return
c. ungrounded supply
d. none of the above

---

59. 250.121 An equipment grounding conductor shall not be used as a _____conductor.

a. ungrounded
b. grounding electrode
c. none of the above
d. both a & b

---

60. 250.121 Equipment grounding conductors shall be permitted to be sectioned within a multiconductor cable, provided the combined circular mil area complies with Table _____.

a. 250.66
b. 250.122
c. none of the above
d. both a & b

---

61. 250.190 Requirements for grounding of equipment of systems and circuits of I kV and over (high voltage) have been revised and expanded. An EGC is required to be installed along with the medium voltage feeder conductors for _____ systems.

a. solidly grounded
b. grounding electrode
c. none of the above
d. both a & b

---

62. 250.190 Grounding Electrode Conductor. If a grounding electrode conductor connects non-current-carrying metal parts to ground, the grounding electrode conductor shall be sized in accordance with Table _____ based on the size of the largest ungrounded service, feeder, or branch-circuit conductors supplying the equipment.

a. 250.66
b. 250.122
c. none of the above
d. both a & b

---

63. 250.190 The grounding electrode conductor shall not be smaller than _____.

a. 6 AWG copper
b. 4 AWG aluminum
c. none of the above
d. both a & b

---

64. 250.190 Equipment grounding conductors requirements shall include:

a General. Equipment grounding conductors that are not an integral part of a cable assembly shall not be smaller than 6 AWG copper or 4 AWG aluminum,
b. Shielded Cables. The metallic insulation shield encircling the current-carrying conductors shall be permitted to be used as an equipment grounding conductor, if it is rated for clearing time of ground-fault current protective device operation without damaging the metallic shield. The metallic tape insulation shield and drain wire insulation shield shall not be used as an equipment grounding conductor for solidly grounded systems.
c. Sizing. Equipment grounding conductors shall be sized in accordance with Table 250.122 based on the current rating of the fuse or the overcurrent setting of the protective relay required to be electrically connected.
d. all of the above

---

65. 250.190 Informational Note: The overcurrent rating for a circuit breaker is the combination of the current transformer ratio and the current pickup setting of the 3 phase transformer.

a. true
b. false

---

66. 280.5 Listing requirement for a surge arrestor (over 1000 volts) section has been _____.

a. added
b. deleted
c. none of the above
d. both a & b

---

67. 300.4 A cable, raceway, or box, installed in exposed or concealed locations under metal-corrugated sheet roof decking, shall be installed and supported so there is not less than _____ measured from the lowest surface of the roof decking to the top of the cable, raceway, or box.

a. 38 mm
b. 1 ½”
c. none of the above
d. both a & b

---

68. 300.4 A _____ shall not be installed in concealed locations in metal corrugated sheet decking type roof.

a. cable
b. raceway
c. box
d. all of the above

---

69. A new section (H) was added to 300.4 to cover _____at a structural joint in a building or other structure.

a. expansion
b. deflection
c. none of the above
d. both a & b

---

70. 300.4 Structural Joints. A listed fitting or other approved means shall be used where a raceway crosses a structural joint intended for _____ used in buildings, bridges, parking garages, or other structures.

a. expansion
b. contraction
c. deflection
d. all of the above

---

71. 300.5 Type MI cable where embedded in concrete, fill, or other masonry or in underground runs must be suitably protected against_____.

a. physical damage
b. corrosive conditions
c. none of the above
d. both a & b

---

72. 300.5 Type MC cable listed for direct burial or concrete encasement or in wet locations with a covering impervious to_____.

a. rain
b. moisture
c. neither a & b
d. both a & b

---

73. 300.5 Two new exceptions were added at _____ to permit Type MI cable and Type MC cable to be installed under a building without being installed in a raceway.

a. 300.4(C)
b. 300.5(C)

c. none of the above
d. both a & b

---

74. 300.5 Underground cable installed under a building required to be in a _____.
a. cable assembly
b. raceway
c. none of the above
d. both a & b

---

75. 300.5 Underground Installations. All conductors of the same circuit typically required to be installed in _____.
a. the same raceway
b. the same cable
c. in close proximity in the same trench
d. all of the above

---

76. 300.5 Allowable underground trench Installations with conductors of the same circuit include:
a. Conductors permitted to be installed in parallel in raceways, multiconductor cables, or direct-buried single conductor cables.
b. Each direct-buried single conductor cable permitted in close proximity in a trench to the other single conductor cables in the same parallel set of conductors in the circuit.
c. none of the above
d. both a & b

---

77. 300.11 Non-Fire-Rated Assemblies-ceiling grid support systems. An independent means of secure support to be provided for wiring methods. Where independent support wires are used, they shall be distinguishable by _____.
a. color
b. tagging
c. other effective means
d. all of the above

---

78. 300.11 A _____ ceiling grid support system requires additional wiring method support wires to be distinguishably marked for their identification.
a. Non-Fire-Rated Assemblies
b. Fire-Rated Assemblies
c. none of the above
d. both a & b

---

79. 300.11 An independent means of secure support shall be provided for a Non-Fire-Rated ceiling grid support systems and shall be permitted to be attached to the assembly.
a. true
b. false

---

80. 300.50 Wet Locations over 600 Volts, the interior of enclosures or raceways installed underground shall be considered to be a _____ (regardless of the voltage).
a. damp location
b. wet location

c. none of the above
d. both a & b

---

81. 300.50 Insulated conductors over 600 Volts installed in wet locations are required to be listed for use in wet locations and shall comply with _____.
a. 310.10(C)
b. 310.9(C)
c. none of the above
d. both a & b

---

82. 300.50 Any connections or splices in an underground installation over 600 Volts shall be approved for _____.
a. damp locations
b. wet locations
c. none of the above
d. both a & b

---

83. All tables located within Article 310 were renumbered in _____ NEC.
a. 2011
b. 2008
c. none of the above
d. both a & b

---

84. Article 310 was extensively reorganized in _____ NEC.
a. 2011
b. 2008
c. none of the above
d. both a & b

---

85. 310.10 Nonshielded cable may be replaced with nonshielded cable (up to 5000 volts) in existing installations in industrial establishments only and under specific conditions.
a. true
b. false

---

86. 310.10 Informational Note: The primary purposes of shielding are to confine the voltage stresses to the insulation, dissipate insulation leakage current, drain off the capacitive charging current, and carry ground fault current to facilitate operation of ground fault protective devices in the event of an electrical cable fault.
a. true
b. false

---

87. 310.10 Shielding. Non-shielded, ozone-resistant insulated conductors with a maximum phase-to-phase voltage of _____ volts shall be permitted in Type MC metal clad cables in industrial establishments where the conditions of maintenance and supervision ensure that only qualified persons service the installation.
a. 600
b. 5000
c. none of the above
d. both a & b

---

88 310.10 Exception No. 2: Nonshielded insulated conductors listed by a qualified testing laboratory shall be permitted for use up to 5000 volts to replace existing nonshielded conductors on existing equipment in industrial A establishments only under the following conditions:

a. Where the condition of maintenance and supervision ensures that only qualified personnel install and service the installation.
b. Conductors shall have insulation resistant to electric discharge and surface tracking, or the insulated conductors) shall be covered with a material resistant to ozone, electric discharge, and surface tracking.
c. none of the above
d. both a & b

---

89. 310.10 Exception No. 2: Nonshielded insulated conductors listed by a qualified testing laboratory shall be permitted for use up to 5000 volts to replace existing nonshielded conductors on existing equipment in industrial A establishments only under the following conditions:

. a. Where used in wet locations, the insulated conductors shall have an overall nonmetallic jacket or a continuous metallic sheath.
b. Insulation and jacket thicknesses shall be in accordance with Table 310.13(D).
c. none of the above
d. both a & b

---

90. 310.10 Conductors _____AWG and smaller, comprising each phase, polarity, neutral, or grounded circuit conductor shall not be connected in parallel.

a. 1
b. 2
c. 3
d. 4

---

91. 310.10 Where conductors of size 1/0 and larger are installed in parallel, must be installed as follows:

a. same length
b. consist of same conductor material
c. same circular mil area
d. all of the above

---

92. 310.10 Where conductors of size 1/0 and larger are installed in parallel, must be installed as follows:

a. same insulation type
b. terminated in same manner
c. same coloring
d. both a & b

---

93. 310.10 Exception No. 2: Under _____ supervision, 2 AWG and 1 AWG grounded neutral conductors shall be permitted to be installed in parallel for existing installations.

a. general
b. engineering

c. none of the above
d. both a & b

---

94. 310.10 Equipment Bonding Jumpers. Where parallel equipment bonding jumpers are installed in raceways, they shall be sized and installed in accordance with_____.

a. 310.(H)(1)
b. 250.102
c. none of the above
d. both a & b

---

95. 310.10 Equipment Bonding Jumpers. These conductors shall be permitted for use in any of the wiring methods recognized in Chapter ___ and as specified in their respective tables or as permitted elsewhere in this Code.

a. 2
b. 3
c. none of the above
d. both a & b

---

96. 310.10 Where parallel equipment bonding jumpers are installed in raceways, they shall be sized and installed in accordance with _____.

a. 310.10
b. 250.102
c. none of the above
d. both a & b

---

97. The first column heading has been changed from "Number of Current-Carrying Conductors" to "Number of Conductors" in Table 310.15(B)(3).

a. true
b. false

---

98. Conductors or cables installed in circular raceways exposed to direct sunlight on or above rooftops require adjustments shown in Table _____.

a. 310.16(B)(2)(a)
b. 310.15(B)(3)(c)
c. 310.15(B)(2)(a)
d. all of the above

---

99. All types of circular raceways (including conduits) are subject to the temperature correction factors of Table 310.15(B)(3)(c)

a. true
b. false

---

100. Table 310.15(B)(16) Allowable Ampacities of Insulated Conductors Rated Up to and Including 2000 Volts, 60°C through 90°C (140°F Through 194°F), Not More Than _____ Current-Carrying Conductors in Raceway, Cable, or Earth (Directly Buried), Based on Ambient Temperature of 30°C (86°F).

a. 2
b. 3
c. 4

d. 5

---

101. 310.60 Conductors Rated _____Volts (C) Tables. Ampacities for conductors rated 2001 to 35,000 volts shall be as specified in the Ampacity Table 310.60(C) (67) through Table 310.60(C)(86)..

a. 0 to 600
b. 2001 to 35,000
c. none of the above
d. both a & b

---

102. 314.27(A) Boxes at wall-mounted luminaires or lampholders outlets must be:

a. specifically designed for purpose
b. marked on the interior of the box to indicate the maximum weight of the luminaires permitted to be supported if other than 23 kg (501b).
c. none of the above
d. both a & b

---

103. 314.27(A) Other boxes acceptable for supporting wall-mounted luminaires or lampholders if:

a. Luminaire/lampholder weighs 3 kg (6 ib) or less
b. Luminaire/lampholder or securing yoke is secured by not less than two No. 6 or larger screws
c. none of the above
d. both a & b

---

104. 314.27(A) Boxes at ceiling-mounted luminaires or lampholders outlets:

a. Must be specifically designed for purpose so that a luminaires or lampholders may be attached.
b. Required to support luminaires weighing minimum 23 kg (50 !b).
c. Must be supported independently of the outlet box if luminaires weighing more than 23 kg (50 Ib) unless box is listed and marked for the maximum weight to be supported.
d. all of the above

---

105. 314.27(C) Boxes at Ceiling Fan Outlets. All single or multi-family dwellings, spare, separately switched, ungrounded conductors at ceiling-mounted outlet boxes (in a location acceptable for a ceiling fan) require outlet box or system listed for sole support of a ceiling suspended paddle fan

a. true
b. false

---

106. 314.27 Boxes at Ceiling-Suspended (Paddle) Fan Outlets. Outlet boxes or outlet box systems used as the sole support of a ceiling-suspended (paddle) fan shall be listed, shall be marked by their manufacturer as suitable for this purpose, and shall not support ceiling-suspended (paddle) fans that weigh more than_____.

a. 32 kg
b. 70 Ib
c. none of the above
d. both a & b

---

107. 314.27 For outlet boxes or outlet box systems designed to support ceiling-suspended (paddle) fans that weigh more than _____, the required marking shall include the maximum weight to be supported.

a. 16 kg
b. 35 Ib
c. none of the above
d. both a & b

---

108. 314.28(E) Power Distribution Blocks. New provisions and guidelines added to permit the installation of power distribution blocks in pull and junction boxes

a. true
b. false

---

109. 314.28 Power Distribution Block. Power distribution blocks shall be permitted in pull and junction boxes over 1650 cm^3 (100 $in.^3$) for connections of conductors where installed in boxes and where the installation complies with _____.

a, Installation. Power distribution blocks installed in boxes shall be listed.
b Size. In addition to the overall size requirement in the first sentence of 314.28{A)(2)r the power distribution block shall be installed in a box with dimensions not smaller than specified in the installation instructions of the power distribution block.
c. Wire Bending Space. Wire bending space at the terminals of power distribution blocks shall comply with 312.6.
d. all of the above

---

110. 314.28 Power Distribution Block. Power distribution blocks shall be permitted in pull and junction boxes over 1650 cm^3 (100 $in.^3$) for connections of conductors where installed in boxes and where the installation complies with _____.

a. Live Parts. Power distribution blocks shall not have uninsulated live parts exposed within a box. Whether or not the box cover is installed.
b. Through Conductors. Where the pull or junction boxes are used for conductors that do not terminate on the power distribution block(s), the through conductors shall be arranged so the power distribution block terminals are unobstructed following installation.
c. none of the above
d. both a & b

---

111. 314.28 Power Distribution Block. Power distribution blocks shall be permitted in pull and junction boxes over 1650 cm^3 (100 $in.^3$) for connections of conductors where installed in boxes.

Exception: Equipment grounding terminal bars shall be permitted in enclosures of any size.

a. true
b. false

---

112. 320.2 Definition: Type AC Cable Armored Cable, Type AC - A fabricated assembly of insulated conductors in a flexible _____ metallic armor.

a. interlocked
b. spiral
c. none of the above

d. both a & b

---

113. 328.14 Medium Voltage Cable: Type MV Type MV cable is required to be installed, terminated and tested by _____.

a. a listing agency
b. qualified persons
c. none of the above
d. both a & b

---

114. 334.10(1) Uses Permitted - Type NM Cable Type NM, Type NMC, and Type NMS cables shall be permitted to be used in one- and two-family dwellings and their _____.

a. attached
b. detached garages
c. their storage buildings
d. all of the above

---

115. 338.10(B)(4)(a) Uses Permitted - Type SE Cable. Type SE cable used for interior installations to comply with the provisions in Article 338 and the installation requirements in Part II of Article 334 (Type NM cable) excluding 334.80 (allowable ampacity)

a. true
b. false

---

116. 338.10(B)(4)(a) Uses Permitted - Type SE Cable. Where installed in thermal insulation, the ampacity to comply with _____ conductor temperature rating

a. 60°C
b. 140°F
c. none of the above
d. both a & b

---

117. 338.10(B)(4)(a) Uses Permitted - Type SE Cable. Maximum conductor temperature rating permitted to be used for ampacity adjustment and correction purposes not to exceed _____ rated conductor.

a. 60°C
b. 140°F
c. none of the above
d. both a & b

---

118. 342.30 Securing and Supporting Raceways. Securely fastened within _____of each outlet box, junction box, device box, cabinet, conduit body, or other conduit termination.

a. 900 mm
b. 3 ft
c. none of the above
d. both a & b

---

119. 342.30 Securing and Supporting Raceways. Provisions for unbroken conduit (without couplings) unsupported in lengths up to 450 mm (18 in.) have been deleted

a. true
b. false

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120. 342.30 Securing and Supporting Raceways. (A) Securely Fastened. IMC shall be secured in accordance with one of the following:

a. IMC shall be securely fastened within 900 mm (3 ft) of each outlet box, junction box, device box, cabinet, conduit body, or other conduit termination.

b.(2) Where structural members do not readily permit fastening within 900 mm (3 ft), fastening shall be permitted to be increased to a distance of 1.5 m (5 ft).

c. Where approved, conduit shall not be required to be securely fastened within 900 mm (3 ft) of the service head for above-the-roof termination of a mast.

d. all of the above

2011 NEC Code Updates Part 2-Quiz Answer Sheet

1	a	b	c	d	41	a	b	c	d	81	a	b	c	d
2	a	b	c	d	42	a	b	c	d	82	a	b	c	d
3	a	b	c	d	43	a	b	c	d	83	a	b	c	d
4	a	b	c	d	44	a	b	c	d	84	a	b	c	d
5	a	b	c	d	45	a	b	c	d	85	a	b	c	d
6	a	b	c	d	46	a	b	c	d	86	a	b	c	d
7	a	b	c	d	47	a	b	c	d	87	a	b	c	d
8	a	b	c	d	48	a	b	c	d	88	a	b	c	d
9	a	b	c	d	49	a	b	c	d	89	a	b	c	d
10	a	b	c	d	50	a	b	c	d	90	a	b	c	d
11	a	b	c	d	51	a	b	c	d	91	a	b	c	d
12	a	b	c	d	52	a	b	c	d	92	a	b	c	d
13	a	b	c	d	53	a	b	c	d	93	a	b	c	d
14	a	b	c	d	54	a	b	c	d	94	a	b	c	d
15	a	b	c	d	55	a	b	c	d	95	a	b	c	d
16	a	b	c	d	56	a	b	c	d	96	a	b	c	d
17	a	b	c	d	57	a	b	c	d	97	a	b	c	d
18	a	b	c	d	58	a	b	c	d	98	a	b	c	d
19	a	b	c	d	59	a	b	c	d	99	a	b	c	d
20	a	b	c	d	60	a	b	c	d	100	a	b	c	d
21	a	b	c	d	61	a	b	c	d	101	a	b	c	d
22	a	b	c	d	62	a	b	c	d	102	a	b	c	d
23	a	b	c	d	63	a	b	c	d	103	a	b	c	d
24	a	b	c	d	64	a	b	c	d	104	a	b	c	d
25	a	b	c	d	65	a	b	c	d	105	a	b	c	d
26	a	b	c	d	66	a	b	c	d	106	a	b	c	d
27	a	b	c	d	67	a	b	c	d	107	a	b	c	d
28	a	b	c	d	68	a	b	c	d	108	a	b	c	d
29	a	b	c	d	69	a	b	c	d	109	a	b	c	d
30	a	b	c	d	70	a	b	c	d	110	a	b	c	d
31	a	b	c	d	71	a	b	c	d	111	a	b	c	d
32	a	b	c	d	72	a	b	c	d	112	a	b	c	d
33	a	b	c	d	73	a	b	c	d	113	a	b	c	d
34	a	b	c	d	74	a	b	c	d	114	a	b	c	d
35	a	b	c	d	75	a	b	c	d	115	a	b	c	d
36	a	b	c	d	76	a	b	c	d	116	a	b	c	d
37	a	b	c	d	77	a	b	c	d	117	a	b	c	d
38	a	b	c	d	78	a	b	c	d	118	a	b	c	d
39	a	b	c	d	79	a	b	c	d	119	a	b	c	d
40	a	b	c	d	80	a	b	c	d	120	a	b	c	d

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