Instructions: **Fee $55**

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: 12142 2011 NEC CODE UPDATES PART 4

This course is valid for these credentials:

Credential Description	Cred Code	Credit Hours
Registered - Beginner Electrician	BE	6.0
Commercial Electrical Inspector	CEI	6.0
Industrial Journeyman Electrician	IJE	6.0
Journeyman Electrician	JE	6.0
Master Electrician	ME	6.0
Residential Journeyman Electrician	RJE	6.0
Residential Master Electrician	RME	6.0
UDC-Electrical Inspector	UEI	6.0

2011 NEC Code Updates Part 4

1. 450.14 Transformers - Disconnecting Means. Transformers other than _____ are required to have a disconnecting means located either in sight of the transformer or in a remote location.
   a. Class 1
   b. Class 2
   c. Class 3
   d. both c & b

---

2. 450.14 Transformers - Disconnecting Means. Where located in a remote location, the disconnecting means must be_____ and the location must be field marked on the transformer
   a. lockable
   b. with in sight
   c. none of the above
   d. both a & b

---

3. 450.14 Transformers - Disconnecting Means. New disconnecting means requirements were added for transformers (other than Class 1 or Class 2).
   a. true
   b. false

---

4. 480.2 Definitions: Storage Batteries. The new definition for "Battery System" and revision of "Nominal Battery Voltage" was added.
   a. true
   b. false

---

5. 480.2 Definitions: Storage Batteries. Battery System: Interconnected battery subsystems consisting of one or more storage batteries and battery chargers, and can include_____.

a. inverters
b. converters
c. associated electrical equipment
d. all of the above

---

6. 480.2 Definitions: Storage Batteries. Nominal Battery Voltage: The voltage of a battery based on the _____ of cells in the battery.

a. number
b. type
c. both a & b
d. neither a or b

---

7. 480.2 Definitions: Storage Batteries. Informational Note: The most common nominal cell voltages are:

a. 2 volts per cell for the lead-acid systems, 4 volts per cell for Li-ion systems
b. 1.2 volts per cell for alkali systems
c. 4 volts per cell for Li-ion systems
d. all of the above

---

8. 480.2 Definitions: Storage Batteries. Nominal voltages might vary with different chemistries.

a. true
b. false

---

9. 480.2 Definitions: Storage Batteries. A new definition for battery system and a revision for nominal battery voltage occurred at _____.

a. 480.2
b. 500.2
c. both a & b
d. neither a or b

---

10. 500.2 Definitions (Hazardous Locations). A new definition for "Combustible Dust" has been added at_____.

a. 480.2
c. 500.2
c. both a & b
d. neither a or b

---

11. 500.2 Definitions (Hazardous Locations). Combustible Dust: Any finely divided solid material that is _____ or smaller in diameter (material passing a U.S. No. 40 Standard Sieve).

a. 420 microns
b. 0.017 in.
c. both a & b
d. neither a or b

---

12. 500.2 Definitions (Hazardous Locations). Combustible Dust: Any finely divided solid material that has presents a fire or explosion hazard when _____ in air. [NFPA 499, 2008]

a. dispersed
b. ignited
c. both a & b
d. neither a or b

---

13. A new definition for combustible dust has been added at_____.
a. 501.30
b. 500.2
c. both a & b
d. 480.2

---

14. 501.30(B) Types of EGCs (Class I, Div 1 and 2). _____ installed in Class I, Division 1 and 2 locations must include an equipment bonding jumper of the wire type in compliance with 250.102
a. Flexible metal conduit
b. liquidtight flexible metal conduit
c. none of the above
d. both a & b

---

15. 501.30(B) Types of EGCs (Class I, Div 1 and 2). Exception: Equipment bonding jumper permitted to be deleted where listed liquidtight flexible metal conduit 1.8 m (6 ft) or less in length, with fittings listed for grounding, is used with overcurrent protection in the circuit is 10 amperes or less and the load is not _____.
a. a power utilization load
b. at 125 %
c. neither a or b
d. both a & b

---

16. 501.30(B) Types of EGCs (Class I, Div 1 and 2). Equipment bonding jumper is required for flexible metal conduit and liquidtight flexible metal conduit when used in Class I, Divisions 1 and 2 locations.
a. true
b. false

---

17. 501.140(B)(4) Flexible Cords (Class I, Div 1 and 2). Revisions were made to 501.140(B)(5) to clarify the difference in requirements for _____ between a Class I, Division 1 and Class I, Division 2 location.
a. cord connectors
b. attachment plugs
c. neither a or b
d. both a & b

---

18. 501.140(B)(4) Flexible Cords (Class I, Div 1 and 2). In Division 1 locations or in Division 2 locations with_____ are required to be explosion proof.
a. boxes
b. fittings
c. enclosures
d. all of the above

---

19. 501.140(B)(4) Flexible Cords (Class I, Div 1 and 2). In Division 1 locations or in Division 2 locations the cord must terminate with a listed _____ for the location or a cord connector installed with a seal listed for the location.

a. cord connector
b. attachment plug
c. neither a or b
d. both a & b

---

20. 501.140(B)(4) Flexible Cords (Class I, Div 1 and 2). In Division 2 locations where explosion proof equipment is not required, the cord shall be terminated with a _____.

a. cord connector
b. attachment plug
c. neither a or b
d. both a & b

---

21. 501.140(B)(4) Flexible Cords (Class I, Div 1 and 2). Revisions were made to 501.140(B)(5) to clarify the difference in requirements for cord connectors and attachment plugs between a Class I, Division 1 and a Class I, Division 2 location.

a. true
b. false

---

22. 501.140(B)(5) Flexible Cords (Class I, Div 1 and 2). (B) Installation. Where flexible cords are used, the cords shall comply with all of the following:

a. Be of a type listed for extra-hard usage
b. Contain, in addition to the conductors of the circuit, an equipment grounding conductor complying with 400.23
c. Be connected to terminals or to supply conductors in an approved manner
d. all of the above

---

23. 501.140(B)(5) Flexible Cords (Class I, Div 1 and 2). (B) Installation. Where flexible cords are used, the cords shall comply with all of the following:

a. Be supported by clamps or by other suitable means in such a manner that there is no tension on the terminal connections
b. In Division 1 locations or in Division 2 locations where the boxes, fittings, or enclosures are required to be explosionproof. the cord shall be terminated with a cord connector or attachment plug listed for the location or a cord connector installed with a seal listed for the location. In Division 2 locations where explosionproof equipment is not required, the cord shall be terminated with a listed cord connector or listed attachment plug.
c. Be of continuous length.
d. all of the above

---

24. Informational Note: See _____ for flexible cords exposed to liquids having a deleterious effect on the conductor insulation.

a. 501.30
b. 501.20
c. both a & b
d. 480.2

---

25. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). Pendant luminaires in Class II, Division 1 classified areas are permitted to employ flexible cord listed for hard usage as a wiring method when terminated with a listed cord connector that maintains the _____ protection.

a. dust-tight ignitionproof
b. cord connector
c. attachment plug
d. both a & b

---

26. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). Where wiring between an outlet box or fitting and a pendant luminaire is not enclosed in _____ shall be permitted to be used in accordance with 502.10(A)(2)(5).

a. conduit
b. flexible cord listed for hard usage
c. neither a or b
d. both a & b

---

27. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). Pendant luminaires in Class II, Division 1 classified areas are permitted to employ flexible cord listed for hard usage as a wiring method when terminated with a listed cord connector that maintains the dust-tight ignitionproof protection.

a. true
b. false

---

28. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). Where wiring between an outlet box or fitting and a pendant luminaire is not enclosed in conduit flexible cord listed for hard usage shall be permitted to be used in accordance with 502.10(A)(2)(5). Flexible cord shall not serve as the _____ means for a luminaire.

a. supporting
b. suspended
c. neither a or b
d. both a & b

---

29. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). (3) Pendant Luminaires. Pendant luminaires shall be _____ by threaded rigid metal conduit stems, by threaded steel intermediate metal conduit stems, by chains with approved fittings, or by other approved means.

a. supporting
b. suspended
c. neither a or b
d. both a & b

---

30. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). For rigid stems longer than 300 mm (12 in.), permanent and effective bracing against lateral displacement shall be provided at a level not more than 300 mm (12 in.) above the lower end of the stem, or flexibility in the form of a fitting or a flexible connector listed for the location shall be provided not more than 300 mm (12 in.) from the point of attachment to the supporting _____.

a. box
b. fitting
c. neither a or b

d. both a & b

---

31. 502.130(A)(3) For flexible connection purposes, interlocked armor Type MC cable with listed dust tight termination fittings is now a permitted wiring method for Class III, Division 1 locations.

a. true
b. false

---

32. 502.130(A)(3) Pendant Luminaires (Class II Division 1 Locations). Threaded joints shall be provided with _____ or other effective means to prevent loosening.

a. set screws
b. spring clips
c. neither a or b
d. both a & b

---

33. 503.10(A)(3) Flexible Wiring Methods (Class III, Division 1). In Class III, Division 1 locations where it is necessary to employ flexible connections, one or more of the following shall be permitted:

a. Dusttight flexible connectors
b. Liquidtight flexible metal conduit
c. Liquidtight flexible nonmetallic conduit with listed fittings
d. all of the above

---

34. 503.10(A)(3) Flexible Wiring Methods (Class III, Division 1). In Class III, Division 1 locations where it is necessary to employ flexible connections, one or more of the following shall be permitted:

a. Interlocked armor Type MC cable having an overall jacket of suitable polymeric material and installed with listed dusttight termination fittings
b. Flexible cord in compliance with 503.140
c. neither a or b
d. both a & b

---

35. 503.10(A)(3) Flexible Wiring Methods (Class III, Division 1). For flexible connection purposes, interlocked armor Type MC cable with listed dusttight termination fittings is now a permitted wiring method for _____ locations.

a. Class III, Division 1
b. Class III, Division 2
c. neither a or b
d. both a & b

---

36. 505.15 Wiring Methods (Zone 0, 1, and 2 Locations). (B) Class I, Zone 1. (1) General. In Class I, Zone 1 locations, the following wiring methods shall be permitted:

a. (a) All wiring methods permitted by 505.15(A).
b. In industrial establishments with restricted public access, where the conditions of maintenance and supervision ensure that only qualified persons service the installation, and where the cable is not subject to physical damage, Type MC-HL cable listed for use in Class I, Zone 1 or Division 1 locations, with a gas/vaportight continuous corrugated metallic sheath, an overall jacket of suitable polymeric material, a separate equipment grounding conductor(s) in accordance with 250.122, and

terminated with fittings listed for the application. Type MC-HL cable shall be installed in accordance with the provisions of Article 330. Part II.
(c) In industrial establishments with restricted public access, where the conditions of maintenance and supervision ensure that only qualified persons service the installation, and where the cable is not subject to physical damage, Type ITC-HL cable, listed for use in Class I, Zone 1 or Division 1 locations, with a gas/vaportight continuous corrugated metallic sheath, an overall jacket of suitable polymeric material and terminated with fittings listed for the application. Type ITCC-HL cable shall be installed in accordance with the provisions of Article 727.
d. all of the above

---

37. 505.15 Wiring Methods (Zone 0, 1, and 2 Locations). (B) Class I, Zone 1. (1) General. In Class I, Zone 1 locations, the following wiring methods shall be permitted:
a. Type Ml cable terminated with fittings listed for Class I, Zone 1 or Division 1 locations. Type Ml cable shall be installed and supported in a manner to avoid tensile stress at the termination fittings.
b. Threaded rigid metal conduit, or threaded steel intermediate metal conduit.
c. Type PVC conduit and Type RTRC conduit shall be permitted where encased in a concrete envelope a minimum of 50 mm (2 in.) thick and provided with not less than 600 mm (24 in.) of cover measured from the top of the conduit to grade. Threaded rigid metal conduit or threaded steel intermediate metal conduit shall be used for the last 600 mm (24 in.) of the underground run to emergence or to the point of connection to the aboveground raceway. An equipment grounding conductor shall be included to provide for electrical continuity of the raceway system and for grounding of non-current-carrying metal parts.
d. all of the above

---

38. 505.15 Wiring Methods (Zone 0, 1, and 2 Locations). (B) Class I, Zone 1. Informational Note: See 727.4 and 727.5 for restrictions on use of Type _____ cable.
a. ITC
b. MC
c. AC
d. all of the above

---

39. 505.15 Wiring Methods (Zone 0, 1, and 2 Locations). (2) Flexible Connections. Where necessary to employ _____ listed for Class I, Zone 1 or Division 1 locations or flexible cord in accordance with the provisions of 505.17 terminated with a listed cord connector that maintains the type of protection of the terminal compartment shall be permitted.
a. flexible connections
b. flexible fittings
c. neither a or b
d. both a & b

---

40. 505.15 Wiring Methods (Zone 0, 1, and 2 Locations). Revisions have been incorporated into 5O5.15(B)(I) pertaining to the _____ of specific wiring methods in Class I, Zone 1 classified locations.
a. termination
b. listed fittings
c. neither a or b
d. both a & b

---

41. Table Location 514.3(B)(1). Revisions to Table 5 14.3(B)(1) have been implemented to coordinate with Table 8.3.1 of NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages.

a. true
b. false

---

42. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Revisions to the term "rigid nonmetallic conduit" wiring methods make the "_____ conduit" terminology consistent with other sections and articles through out the NEC.

a. Type RTRC
b. Type PVC
c. neither a or b
d. both a & b

---

43. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Underground wiring shall be installed in _____ conduit.

a. threaded rigid metal
b. threaded steel intermediate metal
c. neither a or b
d. both a & b

---

44. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Any portion of electrical wiring that is below the surface of a Class 1. Division 1. or a Class I, Division 2, location as classified in Table 514.3(B)(1) and Table 514.3(B)(2) shall be sealed within _____ of the point of emergence above grade.

a. 3.05 m
b. 10 ft
c. neither a or b
d. both a & b

---

45. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Except for listed explosionproof reducers at the conduit seal, there shall be no _____ between the conduit seal and the point of emergence above grade. Refer lo Table 300.5.

a. union
b. coupling
c. box or fitting
d. all of the above

---

46. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Exception No. 1: Type MI cable shall be permitted where it is installed in accordance with Article_____.

a. 332
b. 331
c. neither a or b
d. both a & b

---

47. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Exception No. 2: Type PVC conduit or Type RTRC conduit shall be permitted where buried under not less than_____ cover.

a. 600 mm

b. 2 ft
c. neither a or b
d. both a & b

---

48. 514.8 Underground Wiring (Motor Fuel Dispensing Facilities). Where Type PVC conduit or Type RTRC conduit is used, threaded rigid metal conduit or threaded steel intermediate metal conduit shall be used for the last 600 mm (2 ft) of the underground run to emergence or to the point of connection to the aboveground raceway, and an equipment grounding conductor shall be included to provide electrical_____.

a. continuity of the raceway system
b. grounding of non-current-carrying metal parts
c. neither a or b
d. both a & b

---

49 514.11 Circuit Disconnects (Motor Fuel Dispensing Facilities). Circuit disconnects must open simultaneously all conductors of the associated power (including any grounded conductor) and _____ circuits supplying the dispensers.

a. communication video
b. data
c. video
d. all of the above

---

50. 514.11 Circuit Disconnects (Motor Fuel Dispensing Facilities). Single-pole breakers utilizing handle ties shall not be permitted.

a. true
b. false

---

51. 514.11 Circuit Disconnects (Motor Fuel Dispensing Facilities). Circuit disconnects must open simultaneously all conductors of the associated supplying the dispensers. Handle ties on single pole breakers are acceptable for this purpose.

a. true
b. false

---

52. 514.11 Circuit Disconnects (Motor Fuel Dispensing Facilities). All circuits (excluding associated power, communication, data, and video circuits) associated with motor fuel dispensing facilities require a means to simultaneously disconnect from the source of supply in the event of an emergency.

a. true
b. false

---

53. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). The following shall be directly connected to an insulated copper EGC that is installed with the branch circuit conductors in the wiring methods as provided in 517.13(A):

a. The grounding terminals of all receptacles
b. Metal boxes and enclosures containing receptacles
c. All non-current carrying conductive surfaces of fixed electrical equipment likely to become energized that are subject to personal contact, operating at over 100 volts.
d. all of the above

---

54. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). Metal box required to be directly connected to the insulated copper EGC required for grounding at patient care areas.

a. true
b. false

---

55. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). Exception: An insulated equipment bonding jumper that directly connects to the equipment grounding conductor is permitted to connect the box and receptacle(s) to the equipment grounding conductor.

a. true
b. false

---

56. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). Exception No. 1 to (3): Metal faceplates shall be permitted to be connected to the equipment grounding conductor by means of a metal mounting screw(s) securing the faceplate to a _____.

a. grounded outlet box
b. grounded wiring device
c. none of the above
d. both a & b

---

57. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). Exception No. 2 to (3): Luminaires more than _____ above the floor and switches located outside of the patient care vicinity shall be permitted to be connected to an equipment grounding return path complying with 517.13(A),

a. 2.3 m
b. 71/2 ft
c. none of the above
d. both a & b

---

58. 517.13(B) Grounding of Receptacles (Patient Care Areas of Health Care Facilities). (2) Sizing. Equipment grounding conductors and equipment bonding jumpers shall be sized in accordance with _____.

a. 250.122
b. 250.124
c. none of the above
d. both a & b

---

59. 517.16 Receptacles with IG Terminals (Patient Care Areas - Health Care Facilities). The installation of isolated grounding-type receptacles in patient care areas of health care facilities is now prohibited.

a. true
b. false

---

60. 517.16 Receptacles with IG Terminals (Patient Care Areas - Health Care Facilities). Receptacles in patient care areas of health care facilities require two effective ground-fault current paths required in patient care areas in accordance with_____.

a. 517.13
b. 517.14

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

---

61 517.16 Receptacles with IG Terminals (Patient Care Areas - Health Care Facilities). Receptacles with insulated grounding terminals, as described in 250.146(D), shall not be permitted.

a. true
b. false

---

62. 517.17(B) Feeder GFP (Health Care Facilities). Where ground-fault protection is provided as specified by 230.95 or 215.10, an additional step of GFP is required in all next level feeder disconnecting means _____ toward the load.

a. downstream
b. simultaneously
c. upstream
d. both a & b

---

63. 517.17(B) Feeder GFP (Health Care Facilities). Additional levels of GFP shall not be installed as follows:

a, On the load side of an essential electrical system transfer switch
b. Between the on site generating unit(s) described in 517.35)b) and the essential system transfer switch(es).
c. On electrical systems that are not solidly grounded wye systems (greater than 150 volts to 600 volts phase to phase)
d. all of the above

---

64. 517.18(A) Patient Bed Locations. Each patient bed location shall be supplied by at least two branch circuits, _____.

a. one from the emergency system
b. one from the normal system
c. one from the computer system
d. both a & b

---

65. 517.18(A) Patient Bed Locations. The branch circuit serving patient bed locations shall not be part of a _____ branch circuit

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

---

66. 517.18(B) Patient Bed Location Receptacles. "_____" has been added to the acceptable configuration of receptacles required at patient bed locations of health care facilities.

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

---

67. 517.18(B) Patient Bed Location Receptacles. Each patient bed location to be provided with a minimum of ____ receptacles

a. 2

b. 4
c. 3
d. 1

---

68. 517.18(B) Patient Bed Location Receptacles. Permitted receptacles include: _____, or any combination of the three.
a. single,
b. duplex
c. quadruplex
d. all of the above

---

69. 517.18(B) Patient Bed Location Receptacles. All receptacles shall be listed _____.
a. hospital grade
b. and identified
c. none of the above
d. both a & b

---

70. 517.18(B) Patient Bed Location Receptacles. All receptacles shall be connected to an insulated _____ equipment grounding conductor.
a. copper
b. aluminum
c. none of the above
d. both a & b

---

71. 517.63(A) Battery-powered Lighting Units. Battery-powered lighting units in anesthetizing locations are permitted to be connected to the _____ and the word "emergency" and the reference to 700.12(F) was eliminated.
a. critical lighting circuits
b. computer circuits
c. lighting circuits
d. all of the above

---

72. 517.63(A) Battery-powered Lighting Units. Battery-powered Emergency Lighting Units - One or more battery-powered emergency lighting units to be provided and permitted to be wired to the critical lighting circuit in the area and connected ahead of any_____.
a. local receptacles
b. local switches
c. neither a & b
d. both a & b

---

73. 517.63(A) Battery-powered Lighting Units. Battery-powered lighting units in _____ locations are permitted to be connected to the critical lighting circuits.
a. examining
b. anesthetizing
c. none of the above
d. both a & b

---

74. 517.160(A)(5) Conductor Identification. Isolated power system circuit conductors required to be identified by colors specified in 517.160(A)(5) and include at least one distinctive colored stripe other than _____ along the entire length of the conductor

a. white
b. green
c. gray
d. all of the above

---

75. 517.160(A)(5) Conductor Identification. At least one distinctive colored stripe shall run along the entire length of the _____ conductors is required for identification of isolated power circuit conductors.
a. brown
b. orange
c. yellow
d. all of the above

---

76. 517.160(A)(5) Conductor Identification. For 3-phase systems, the third conductor shall be identified as _____ with at least one distinctive colored stripe other than white, green, or gray along the entire length of the conductor.
a. orange
b. yellow
c. none of the above
d. both a & b

---

77. 517.160(A)(5) Conductor Identification. Where isolated circuit conductors supply 125-volt. single-phase. 15- and 20-ampere receptacles, the striped _____ conductor(s) shall be connected to the terminals on the receptacles that are identified in accordance with 200.10(B) for connection to the grounded circuit conductor.
a. orange
b. yellow
c. none of the above
d. both a & b

---

78. 518.3 Other Articles (Assembly Occupancies). (B) Temporary Wiring. In exhibition halls used for display booths, as in trade shows, the temporary wiring shall be permitted to be installed in accordance with Article 590. Flexible cables and cords approved for _____ shall be permitted to be laid on floors where protected from contact by the general public.
a. hard usage
b. extra-hard usage
c. none of the above
d. both a & b

---

79. 518.3 Other Articles (Assembly Occupancies). The ground-fault circuit-interrupter requirements of 590.6 shall not apply.
a. true
b. false

---

80. 518.3 Other Articles (Assembly Occupancies). Where ground-fault circuit-interrupter protection for personnel is supplied by plug-and-cord-connection to the branch circuit or to the feeder, the GFCI protection shall be listed as portable GFCI protection or provide a level of protection equivalent to a portable GFCI, _____.
a. whether assembled in the field
b. whether assembled at the factory

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

---

81. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips (Theaters, Audience Areas of Motion Picture and Television Studios, Performance Areas, and Similar Locations). (A) General. Borders and proscenium sidelights shall be as follows:

a. Constructed as specified in 520.43
b. Suitably stayed and supported
c. Designed so that the flanges o! the reflectors or other adequate guards protect the lamps from mechanical damage and from accidental contact with scenery or other combustible material.
d. all of the above

---

82. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips (Theaters, Audience Areas of Motion Picture and Television Studios, Performance Areas, and Similar Locations). (B) Connector Strips and Drop Boxes. Connector Strips and Drop Boxes shall be as follows:

a. Suitably stayed and supported
b. Listed as stage and studio wiring devices
c. none of the above
d. both a & b

---

83. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips. (C) Cords and Cables for Border Lights, Drop Boxes, and Connector Strips. (1) General. Cords and cables for supply to _____ shall be listed for extra-hard usage. The cords and cables shall be suitably supported. Such cords and cables shall be employed only where flexible conductors are necessary. Ampacity of the conductors shall be as provided in 400.5.

a. border lights
b. drop boxes
c. connector strips
d. all of the above

---

84. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips. (C) Cords and Cables for Border Lights, Drop Boxes, and Connector Strips. (2) Cords and Cables Not in Contact with Heat-Producing Equipment. Listed multiconductor _____not in direct contact with equipment containing heat-producing elements shall be permitted to have their ampacity determined by Table 520.44. Maximum load current in any conductor with an ampacity determined by Table 520.44 shall not exceed the values in Table 520.44.

a. extra-hardusage-type cords
b. cables
c. none of the above
d. both a & b

---

85. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips. (C) Cords and Cables for Border Lights, Drop Boxes, and Connector Strips. (3) Identification of Conductors in Multiconductor Extra-hard Usage Cords and Cables. Grounded (neutral) conductors shall be _____at their terminations.

a. white without stripe
b. identified by a distinctive white marking
c. none of the above

d. both a & b

---

86. 520.44 Borders, Proscenium Sidelights, Drop Boxes, and Connector Strips. (C) Cords and Cables for Border Lights, Drop Boxes, and Connector Strips. Grounding conductors shall be _____at their terminations.

a. green with or without yellow stripe
b. identified by a distinctive green marking
c. none of the above
d. both a & b

---

87 525.5(B)(2) Overhead Conductor Clearances (Carnivals, Circuses, Fairs, and Similar Events). Portable structures to be maintained not less than _____ in any direction from overhead conductors operating at 600 volts or less (except for the conductors supplying the portable structure) [525.5(B)(l)j.

a. 4.5 m
b. 15 ft
c. none of the above
d. both a & b

---

88 525.5(B)(2) Overhead Conductor Clearances (Carnivals, Circuses, Fairs, and Similar Events). Portable structures shall not be located under or within a space that is 4.5 m (15 ft) horizontally and _____of conductors operating in excess of 600 volts [525.5(B)(2)]

a. extending vertically to grade
b. extending horizontally to grade
c. none of the above
d. both a & b

---

89. 547.5(G) GFCI - Agricultural Buildings. The omission of GFCI protection for an accessible receptacle supplying a dedicated load located within 900 mm (3 ft) of a GFCI protected receptacle at agricultural buildings has been _____.

a. amended
b. revised
c. deleted
d. none of the above

---

90. 547.5(G) GFCI - Agricultural Buildings. All 125-volt, single-phase, 15- and 20-ampere general-purpose receptacles installed in agricultural building locations below shall have GFCI protection:

a. Areas having an equipotential plane
b. Damp or wet locations
c. none of the above
d. both a & b

---

91. 547.5(G) GFCI - Agricultural Buildings. All 125-volt, single-phase, 15- and 20-ampere general-purpose receptacles installed in agricultural building locations below shall have GFCI protection:

a. Dirt confinement areas for livestock
b. Outdoors
c. none of the above
d. both a & b

---

92. 547.9(D) Identification of Distribution Point(s). Where an agricultural site is supplied by more than one distribution point, a permanent plaque or directory is required to be installed at the main distribution point.

a. true
b. false

---

93. 547.9(D) Identification of Distribution Point(s). A permanent plaque or directory is required to be installed at the main distribution point if the distance between distribution points is less than 25 ft.

a. true
b. false

---

94. 547.9(D) Identification of Distribution Point(s) If a permanent plaque or directory is required to be installed then it shall be installed at each of these distribution points denoting the location of each of the other distribution points and the buildings or structures served by each.

a. true
b. false

---

95. 547.10(B) Equipotential Planes – Bonding (Agricultural Buildings). Equipotential planes must be installed in confinement areas with concrete floors and slabs _____ where metallic equipment is located that may become energized and accessible to livestock.

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

---

96. 547.10(B) Equipotential Planes – Bonding (Agricultural Buildings). The bonding conductor for the equipotential bonding plane at agricultural buildings is required to be a _____, insulated, covered or bare conductor.

a. stranded copper
b. solid copper clad
c. solid copper
d. both c & b

---

97. 547.10(B) Equipotential Planes – Bonding (Agricultural Buildings). The bonding conductor for the equipotential bonding plane at agricultural buildings is required to be not smaller than ___ AWG.

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

---

98. 547.10(B) Equipotential Planes – Bonding (Agricultural Buildings). The means of bonding to wire mesh or conductive elements shall be by pressure connectors or clamps of_____, or an equally substantial approved means.

a. brass
b. copper
c. copper alloy

d. all of the above

---

99. 547.10(B) Equipotential Planes – Bonding (Agricultural Buildings). Slatted floors that are supported by structures that are a part of an equipotential plane shall be require bonding.

a. true
b. false

---

100. 55O.13(B) GFCIs (Mobile and Manufactured Homes). All 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed in the following locations shall be provided with GFCI protection:

a. Outdoors
b. In compartments accessible from outside the unit
c. Bathrooms (including receptacles in luminaires)
d. all of the above

---

101. 55O.13(B) GFCIs (Mobile and Manufactured Homes). All 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed in the following locations shall be provided with GFCI protection:

a. Kitchen countertop receptacles
b. Receptacle outlets located within 6 ft of a wet bar sink
c. none of the above
d. both a & b

---

102. 55O.13 (B) GFCIs (Mobile and Manufactured Homes). The exceptions in 210.8(A) shall not be permitted.

a. true
b. false

---

103. 55O.13 (B) GFCIs (Mobile and Manufactured Homes). _____ supplying branch circuits shall be permitted to be protected by a ground-fault circuit-interrupter in lieu of the provision for such interrupters specified herein.

a. Feeders
b. Conductors
c. neither a or b
d. both a & b

---

104. 550.15(H) Under-Chassis Wiring. Where closely routed_____, reinforced thermosetting resin conduit (RTRC) listed for above ground use, Type MI cable, electrical metallic tubing or rigid polyvinyl chloride conduit (PVC) shall be permitted.

a. against frames
b. against equipment enclosures
c. none of the above
d. both a & b

---

105. 550.15(H) Under-Chassis Wiring. Where outdoor or under-chassis wiring is exposed to_____, protection is required by rigid metal conduit or intermediate metal conduit.

a. moisture
b. physical damage
c. neither a or b
d. both a & b

---

106. 550.25 AFCIs (Mobile and Manufactured Homes). All 120-volt branch circuits that supply 15- and 20-ampere outlets installed in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas of _____ shall comply with 210.12 (AFCI).

a. mobile homes
b. manufactured homes
c. none of the above
d. both a & b

---

107. 551.30(B) Generators (Recreational Vehicles). Automatic transfer switches listed for _____ are required for generators installed on recreational vehicles.

a. emergency systems
b. optional standby systems
c. none of the above
d. both a & b

---

108. 551.30(B) Generators (Recreational Vehicles). Generator Protection: Equipment shall be installed to ensure that the current-carrying conductors from the engine generator and from an outside source are not connected to a vehicle circuit at the same time.

a. true
b. false

---

109. 552.59(A) Outdoor Outlets (Park Trailers). Outdoor park trailer receptacles and switches must have _____ location covers and enclosures in accordance with 406.9 and 404.4

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

---

110. 552.59(A) Outdoor Outlets (Park Trailers). Outdoor fixtures, including luminaires, and equipment shall be listed for outdoor use.

a. true
b. false

---

111. 555.3 Ground Fault Protection (Marinas and Boatyards). GFCI protection on the main overcurrent protective device servicing a marina or boatyard is required or individual GFCI protection on each _____ is required.

a. branch circuit
b. feeder
c. none of the above
d. both a & b

---

112. 555.3 Ground Fault Protection (Marinas and Boatyards). Ground fault protection of each individual branch or feeder circuit shall be permitted as a suitable alternative.

a. true
b. false

---

113. Table 555.12 Demand Factors. Table 555.12 has been revised to clearly indicate that the receptacles addressed by this table are _____receptacles only.

a. individual exterior
b. shore power
c. multi branch
d. all of the above

---

114. 555.12 Load Calculations for Service and Feeder Conductors (Marinas and Boatyards). Note 1. Where shore power accommodations provide two receptacles specifically for an individual boat slip and these receptacles have different voltages (for example, one 30-amperer 125-volt and one 50-ampere, 125/250-volt), _____shall be required to be calculated.

a. only the receptacle with the smaller kilowatt demand
b. only the receptacle with the larger kilowatt demand
c. both of the receptacles
d. none of the above

---

115. 555.12 Load Calculations for Service and Feeder Conductors (Marinas and Boatyards). Note 2. If the facility being installed includes individual kilowatt-hour sub-meters for each slip and is being calculated using the criteria listed in Table 555.12 the total demand amperes may be multiplied by _____ to achieve the final demand amperes.

a. 0.9
b. .09
c. 09.0
d. both a & b

---

116. 555.12 Load Calculations for Service and Feeder Conductors (Marinas and Boatyards). Informational Note: These demand factors may be inadequate in areas of extreme hot or cold temperatures with loaded circuits for _____ equipment.

a. heating
b. air-conditioning
c. refrigerating
d. all of the above

---

117. 555.13 Wiring Methods and Installation [Marinas and Boatyards). A listed marine power outlet employing terminal _____ is permitted in lieu of a required junction box for portable power cables used for a wiring method at a marina or boatyard.

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

---

118. 555.13 Wiring Methods and Installation (Marinas and Boatyards). Where portable power cables are used as permitted in 555.13(A)(2)(2); there shall be an approved junction box of _____ construction with permanently installed terminal blocks on each pier section to which the feeder and feeder extensions are to be connected.

a. corrosion-resistant
b. weather tight
c. rain tight
d. both a & b

---

119. 555.13 Wiring Methods and Installation (Marinas and Boatyards). A listed marine power outlet employing terminal blocks/bars shall be permitted in lieu of a junction box. Metal junction boxes and their covers, and metal screws and parts that are exposed externally to the boxes, shall be _____.

a. of corrosion-resistant materials protected by material resistant to corrosion
b. protected by material resistant to corrosion
c. none of the above
d. both a & b

---

120. 555.13 Wiring Methods and Installation (Marinas and Boatyards). A _____ marine power outlet employing terminal blocks/bars shall be permitted in lieu of a junction box.

a. listed
b. identified
c. approved
d. all of the above

---

121. 590.4(D) Receptacles (Temporary Installations). In-use covers for receptacles installed in wet locations on an enclosure supported from grade will now require hood covers of the "_____" type

a. commercial duty
b. extra-duty
c. extra heavy-duty
d. both a & b

---

122. 590.4(D) Receptacles (Temporary Installations). All 15- and 20-ampere, 125- and 250-volt receptacles installed in a wet location shall comply with 406.9(B)(l)

a. true
b. false

---

123. 590.4(D) Receptacles (Temporary Installations). (1) Ail Receptacles. All receptacles shall be of the grounding type unless installed in a _____.

a. continuous metal raceway that qualifies as an equipment grounding conductor in accordance with 250.118
b. continuous metal-covered cable that qualifies as an equipment grounding conductor in accordance with 250.118,
c. neither a or b
d. both a & b

---

124. 590.4(D) Receptacles (Temporary Installations). All branch circuits shall include a _____.

a. separate equipment grounding conductor
b. electrically connected to the equipment grounding conductor(s)
c. none of the above
d. both a & b

---

125. 590.4(D) Receptacles (Temporary Installations). Receptacles on construction sites shall not be installed on branch circuits that supply _____.

a. other receptacle loads
b. temporary lighting
c. neither a or b

d. both a & b

---

126. 590.4(D) Receptacles (Temporary Installations). Receptacles shall not be connected to the same ungrounded conductor of _____ circuits that supply temporary lighting.

a. multi-wire
b. branch
c. individual
d. both a & b

---

127. 590.6 Ground-Fault Protection for Personnel. 590.6 has been revised into a more "user-friendly" format and will require receptacles on generators _____ to have integral GFCI protection.

a. 15 kw
b. smaller than 15 kw
c. none of the above
d. both a & b

---

128. 590.6 Ground-Fault Protection for Personnel. This revision will also require "in-use" covers and weather-resistant type receptacles in _____ locations at construction sites.

a. damp
b. wet
c. dry
d. both a & b

---

129. 590.6 Ground-Fault Protection for Personnel. Exception: In industrial establishments only, where conditions of maintenance and supervision ensure that only qualified personnel are involved, an assured equipment grounding conductor program as specified in 590.6(B)(2) shall be permitted for only those receptacle outlets used to supply equipment that would create a greater hazard _____.

a. if power were interrupted
b. do to having a design that is not compatible with GFCI protection.
c. none of the above
d. both a & b

---

130. 590.6 Ground-Fault Protection for Personnel. (1) Receptacle Outlets Not Part of Permanent Wiring. All 125-volt, single-phase, _____ ampere receptacle outlets that are not a part of the permanent wiring of the building or structure and that are in use by personnel shall have ground-fault circuit-interrupter protection for personnel.

a. 15
b. 20
c. 30
d. all of the above

---

131. 590.6 Ground-Fault Protection for Personnel. (2) Receptacle Outlets Existing or Installed as Permanent Wiring, Ground-fault circuit-interrupter protection for personnel shall be provided for all 125-volt, single-phase, 15, 20, and 30 ampere _____ as part of the permanent wiring of the building or structure rand used for temporary electric power.

a. receptacle outlets installed
b. are existing
c. none of the above

d. both a & b

---

132. 590.6 Ground-Fault Protection for Personnel. Listed cord sets or devices incorporating listed ground-fault circuit-interrupter protection for personnel identified for portable use shall not be permitted.

a. true
b. false

---

133. 590.6 Ground-Fault Protection for Personnel. (3)(B) Use of Other Outlets. For temporary wiring installations, receptacles, other than those covered by 590.6(A)(1) through 590.6(A)(3) used to supply temporary power to equipment used by personnel during construction, remodeling, maintenance, repair, or demolition of buildings, a structures, equipment, or similar activities, shall have protection in accordance with (B)(1) or the _____ in accordance with (B)(2).

a. assured equipment grounding conductor program
b. listed cord sets or devices incorporating listed ground-fault circuit-interrupter
c. GFCI main breaker
d. all of the above

---

134. 600.4 Markings - Electric Signs and Outline Lighting. _____ required to be marked with such things as manufacturer's name, trademark, input voltage and current rating, maximum allowable lamp wattage per lampholder, and other means of identification.

a. signs
b. outline lighting systems
c. both a & b
d. none of the above

---

135. 600.4 Markings - Electric Signs and Outline Lighting. Markings and listing labels are not required to be visible after installation but must be _____ applied in a location visible during servicing.

a. permanently
b. field
c. temporarily
d. both a & b

---

136. 600.4 Markings - Electric Signs and Outline Lighting. Marking and labels must be permanent, durable and when in wet locations shall be_____.

a. durable mark
b. weatherproof
c. long lasting
d. all of the above

---

137. 600.4 Markings - Electric Signs and Outline Lighting. (E) Section Signs. Section signs shall be marked to indicate that _____ would be required.

a. field-wiring
b. installation instructions
c. qualified installers
d. both a & b

---

138. 600.5(B) Branch Circuit Ratings. Branch circuits that supply signs shall be considered to be _____ for the purposes of calculations
a. continuous loads
b. continuous duty
c. non-continuous loads
d. both a & b

---

139. 600.5(B) Branch Circuit Ratings. Branch circuits supplying neon tubing installations shall not be rated greater than _____ amperes.
a. 30
b. 40
c. 25
d. 20

---

140. 600.5(B) Branch Circuit Ratings. Branch circuits that supply all other signs and outline lighting systems shall not be rated greater than _____ amperes.
a. 30
b. 40
c. 15
d. 20

---

141. 600.7 Bonding of Metal Parts (Signs). Metal parts of signs and outline lighting systems are generally required to be bonded together to _____.
a. the associated transformer
b. the power-supply equipment grounding conductor
c. none of the above
d. both a & b

---

142. 600.7 Bonding of Metal Parts (Signs). New exception eliminates the requirements for bonding of remote sections of a sign supplied by a _____ power source.
a. Class 2
b. Class 1
c. 120 volt
d. none of the above

---

143. Article 600 - Part II Field-Installed Skeleton Tubing, Outline Lighting, and Secondary Wiring 600.30 Applicability - Part II of this article shall apply to all of the following:
a. Field-installed skeleton tubing;
b. Field-installed secondary circuits
c. Outline lighting
d. all of the above

---

144. Skeleton neon tubing, outline lighting, and their secondary wiring are covered by Part II of Article _____.
a. 500
b. 600
c. 645
d. both a & b

---

145. 600.33 LED Sign Illumination Systems. Secondary Wiring (Electric Signs and Outline Lighting). The wiring methods and materials shall be installed in accordance with the _____ using any applicable wiring methods from Chapter 3 and the requirements for Class 2 circuits contained in Part III of Article 725.

a. UL Book
b. sign manufacturer's installation instructions
c. neither a or b
d. both a & b

---

146. 604.6(A)(2) Ex. No. 3 to (2) Conduit Types. Manufactured wiring systems generally must be constructed of listed _____.

a. flexible metal conduit
b. listed liquidtight flexible conduit
c. none of the above
d. both a & b

---

147. 604.6(A)(2) Ex. No. 3 to (2) Conduit Types. Listed manufactured wiring systems containing unlisted flexible metal conduit of non-circular cross section is permitted as a type of acceptable conduit for manufactured wiring systems when provided with factory installed mating connectors and fittings.

a. true
b. false

---

148. 620.53 (Elevator Disconnecting Means). Exception: Elevators are generally required to have a single means for disconnecting all ungrounded car light, receptacle(s), and ventilation power-supply conductors for that elevator car.

a. true
b. false

---

149. 620.53 (Elevator Disconnecting Means). Exception: A new exception has been added to permit the disconnecting means for an elevator to be in accordance with 430.109(C) where the circuit employs a stationary motor of _____.

a. 2-hp
b. < 2-hp
c. none of the above
d. both a & b

---

150. 620.53 (Elevator Disconnecting Means). Exception: 430.109(C) permits as a disconnecting means the use of:

a. a general-use switch
b. general-use snap switch suitable only for use on ac where the motor FLA rating is not more than 80% of the ampere rating of the switch
c. a listed manual motor controller having a hp rating not less than the rating of the motor and marked "Suitable as Motor Disconnect"
d. all of the above

---

151. 620.53 (Elevator Disconnecting Means). Exception: Where an individual branch circuit supplies car lighting, a receptacle(s), and a ventilation motor not exceeding ___ hp, the disconnecting means required by 620.53 shall be permitted to comply with 430.109(C).

a. 1

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

---

152. 620.53 (Elevator Disconnecting Means). Exception: This disconnecting means shall be _____ and shall be capable of being locked in the open position.
a. listed
b. identified
c. approved
d. all of the above

---

153. 620.53 (Elevator Disconnecting Means). Exception: Portable means for adding a lock to the switch or circuit breaker shall be permitted as the means required to be installed at the disconnecting means and shall remain with the equipment.
a. true
b. false

---

154. 620.53 (Elevator Disconnecting Means). Exception: This disconnecting means shall remain in place _____ the lock installed.
a. with
b. without
c. both a & b
d. none of the above

---

155. 620.53 (Elevator Disconnecting Means). Exception: The provision for locking or adding a lock to the disconnecting means shall be installed _____ the switch or circuit breaker used as the disconnecting means.
a. on
b. at
c. none of the above
d. both a & b

---

156. 625.2 Definitions: Electric Vehicle: Electric Vehicle: An automotive-type vehicle for on-road use primarily powered by an electric motor that draws current from a _____, or other source of electric current.
a. rechargeable storage battery
b. fuel cell
c. photovoltaic array
d. all of the above

---

157. 625.2 Definitions: Electric Vehicle: Electric Vehicle: Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles.
a. true
b. false

---

158. 625.2 Definitions: PHEV Plug-in Hybrid Electric Vehicle (PHEV): A type of electric vehicle intended for _____ with the ability to store and use off-vehicle electrical energy in the rechargeable energy storage system, and having a second source of motive power.
a. on-road use
b. off-road use

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

---

159. 625.2 Definitions: RESS Rechargeable Energy Storage System: Any power source that has the capability to be _____.
a. charged
b. discharged
c. recycled
d. both a & b

---

160. 625.2 Definitions: RESS Rechargeable Energy Storage System: Informational Note: Batteries, capacitors, and electro mechanical flywheels are examples of _____ energy storage systems.
a. rechargeable
b. discharged
c. recyclable
d. both a & b

---

161. 626.24(B)(1) Electrified Truck Parking Space Receptacles: Each electrified truck parking space must be equipped with a maximum of _____ receptacle(s).
a. 2
b. 3
c. 1
d. none of the above

---

162. 626.24(B)(1) Electrified Truck Parking Space Receptacles: Each electrified truck parking space must be equipped with receptacles that each have 2-pole, 3-wire grounding type and rated ____ amperes, 125 volts.
a. 25
b. 15
c. 30
d. none of the above

---

163. 626.24(B)(1) Electrified Truck Parking Space Receptacles: Each electrified truck parking space must be equipped with receptacles must have _____ receptacles connected to two separate branch Circuits.
a. three of the three
b. one of the three
c. neither a or b
d. both a & b

---

164. 626.24(B)(1) Electrified Truck Parking Space Receptacles: Revised language permits the use of conventional GFCI _____ receptacles for GFCI protection of electrified truck parking spaces. With the language of 626.24(B)(1) In the 2008 NEC, the use of duplex receptacles was prohibited. Since no single-GFCI receptacle has been manufactured, this limited the method of providing GFCI protection to a circuit-breaker-type GFCI overcurrent device.
a. duplex
b. single
c. none of the above

d. both a & b

---

165. 645.2 Definitions: Information Technology Equipment Room. A _____ within the information technology equipment area that contains the information technology equipment.

a. room
b. area
c. neither a or b
d. both a & b

---

166. 645.2 Definitions: Information Technology Equipment (ITE). Equipment and systems are rated _____ V or less.

a. 600
b. 800
c. none of the above
d. both a & b

---

167. 645.2 Definitions: Information Technology Equipment (ITE). This equipment is normally found in _____ establishments and similar environments classified as ordinary locations, that are used for creation, and manipulation of data, voice, video and similar signals.

a. offices
b. other business
c. none of the above
d. both a & b

---

168. 645.2 Definitions: Information Technology Equipment (ITE). This equipment includes:

a. communications equipment as defined in Part I of Article 100
b. process communications circuits as defined in 800.2
c. neither a or b
d. both a & b

---

169. 645.2 Definitions: Information Technology Equipment (ITE). Informational Note: For information on listing requirements for both information technology equipment and communication equipment, see UL_____.

a. 60950-1
b. 60950-2
c. none of the above
d. both a & b

---

170. 645.4 Special Requirements for Information Technology Equipment Room. This article shall be permitted to provide alternate wiring methods to the provisions of Chapters 1 through 4 for power wiring, 725.154 for signaling wiring, and 770.113(C) and Table 770.154(a) for optical fiber cabling, when all of the following conditions are met:

a. Disconnecting means complying with 645.10 are provided.
b. A separate heating/ventilating/air-conditioning (HVAC) system is provided that is dedicated for information technology equipment use and is separated from other areas of occupancy. Any HVAC system that serves other occupancies shall be permitted to also serve the information technology equipment room if fire/smoke dampers are provided at the point of penetration of the room boundary. Such dampers shall operate

on activation of smoke detectors and else by operation of the disconnecting means required by 645.10.
c. Ail information technology and communications equipment installed in the room is listed.
d. all of the above

---

171. 645.4 Special Requirements for Information Technology Equipment Room. This article shall be permitted to provide alternate wiring methods to the provisions of Chapters 1 through 4 for power wiring, 725.154 for signaling wiring, and 770.113(C) and Table 770.154(a) for optical fiber cabling, when all of the following conditions are met:
a. The room is occupied by, and accessible to, only those personnel needed for the maintenance and functional operation of the installed information technology equipment.
b. The room is separated from other occupancies by fire-resistant-rated walls, floors, and ceilings with protected openings.
c. Only electrical equipment and wiring associated with the operation of the information technology room is installed in the room.
d. all of the above

---

172. 645.4 Special Requirements for Information Technology Equipment Room. Informational Note: HVAC systems, communications systems, and monitoring systems such as telephone, fire alarm systems, security systems, water detection systems, and other related protective equipment are examples of equipment associated with the operation of the information technology room.
a. true
b. false

---

173. 645.10 Disconnecting Means. An approved means shall be provided to disconnect power to all electronic equipment in the _____.
a. information technology equipment room
b. designated zones within the room.
c. none of the above
d. both a & b

---

174. 645.10 Disconnecting Means. There shall also be a similar approved means to disconnect the power to all dedicated HVAC systems serving the room or designated zones and shall cause all required fire/smoke dampers to close. Disconnecting means shall be implemented by _____.
a. Remote Disconnect Controls
b. Critical Operations Data Systems
c. none of the above
d. both a & b

---

175. 645.17 Power Distribution Units (Information Technology Equipment). The ____ overcurrent device limitation was removed from 645.17, leaving the quantity of overcurrent devices in a PDU panelboard to the design and listing of the panelboard itself.
a. 40
b. 30
c. 20
d. none of the above

---

176. 645.25 Engineering Supervision (IT Equipment). A new section has been added to allow alternative _____ load calculations under engineering supervision for IT equipment.

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

---

177. 645.25 Engineering Supervision (IT Equipment). As an alternative to the feeder and service load calculations required by Parts III and IV of Article 220, feeder and service load calculations for _____ loads shall be permitted to be used if performed by qualified persons under engineering supervision.

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

---

178. 647.7 Receptacles (Sensitive Electronic Equipment). All 125-volt receptacles used for _____ volt technical power shall have a unique configuration and be identified for use with this class of system.

a. 220
b. 60/120
c. 125
d. both a & c

---

179. 647.7 Receptacles (Sensitive Electronic Equipment). Receptacles and attachment plugs rated 125-volt, single-phase, 15- or 20- amperes (identified for use with grounded circuit conductors), are permitted in machine rooms, control rooms, equipment rooms, equipment racks, and other similar locations that are restricted to use by _____.

a. qualified personnel
b. capable personnel
c. experienced employs
d. both a & b

---

180. 647.7 Receptacles (Sensitive Electronic Equipment). Conventionally configured receptacles are permitted to machine rooms, control rooms, equipment rooms, equipment racks, and similar locations that are restricted to use by qualified personnel in areas supplied by special _____ for sensitive electronic equipment.

a. dedicated circuits
b. separately derived systems
c. AFCI circuits
d. all of the above

2011 NEC Code Updates Part 4-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

2011 NEC Code Updates Part 4-Quiz Answer Sheet

121	a	b	c	d	141	a	b	c	d	161	a	b	c	d
122	a	b	c	d	142	a	b	c	d	162	a	b	c	d
123	a	b	c	d	143	a	b	c	d	163	a	b	c	d
124	a	b	c	d	144	a	b	c	d	164	a	b	c	d
125	a	b	c	d	145	a	b	c	d	165	a	b	c	d
126	a	b	c	d	146	a	b	c	d	166	a	b	c	d
127	a	b	c	d	147	a	b	c	d	167	a	b	c	d
128	a	b	c	d	148	a	b	c	d	168	a	b	c	d
129	a	b	c	d	149	a	b	c	d	169	a	b	c	d
130	a	b	c	d	150	a	b	c	d	170	a	b	c	d
131	a	b	c	d	151	a	b	c	d	171	a	b	c	d
132	a	b	c	d	152	a	b	c	d	172	a	b	c	d
133	a	b	c	d	153	a	b	c	d	173	a	b	c	d
134	a	b	c	d	154	a	b	c	d	174	a	b	c	d
135	a	b	c	d	155	a	b	c	d	175	a	b	c	d
136	a	b	c	d	156	a	b	c	d	176	a	b	c	d
137	a	b	c	d	157	a	b	c	d	177	a	b	c	d
138	a	b	c	d	158	a	b	c	d	178	a	b	c	d
139	a	b	c	d	159	a	b	c	d	179	a	b	c	d
140	a	b	c	d	160	a	b	c	d	180	a	b	c	d

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