

**05 NEC quiz 102**

Instructions:

1. Print these pages.
2. Circle the correct answers
3. Use the 2005 NEC Code book.
4. Page down to the last page for the verification forms and mailing instructions.

Article 250-310 Grounding and Bonding

1. The connection (attachment) of the grounding electrode conductor to a grounding electrode must \_\_\_\_.
  - a) be accessible
  - b) be made in a manner that will ensure a permanent and effective grounding path
  - c) a and b
  - d) none of these250.68(A) and (B)
2. The grounding conductor connection to the grounding electrode must be made by \_\_\_\_.
  - a) listed lugs
  - b) exothermic welding
  - c) listed pressure connectors
  - d) any of these250.70 and 250.8
3. A metal elbow that is installed in an underground installation of rigid nonmetallic conduit and is isolated from possible contact by a minimum cover \_\_\_\_ to any part of the elbow, is not required to be grounded.
  - a) of 6 in.
  - b) of 12 in.
  - c) of 18 in.
  - d) as specified in Table250.80 Ex
4. Metal enclosures and raceways for conductors added to existing installations of \_\_\_\_, which do not provide an equipment ground are not required to be grounded if they are less than 25 ft. long, they are free from probable contact with the grounded conductive material, and are guarded against contact by persons.
  - a) nonmetallic-sheathed cable
  - b) open wiring
  - c) knob-and-tube wiring
  - d) all of these250.86 Ex 1
5. Bonding must be provided where necessary to ensure \_\_\_\_ and the capacity to conduct safely any fault current likely to be imposed.
  - a) electrical continuity
  - b) fiduciary responsibility
  - c) listing requirements
  - d) electrical demand250.90
6. Service equipment, service raceways, and service conductor enclosures must be bonded \_\_\_\_.
  - a) to the grounded service conductor
  - b) by threaded raceways into enclosures, couplings, hubs, conduit bodies, etc.
  - c) by listed bonding devices with bonding jumpers
  - d) any of these250.92(B)(1) through (4)
7. Service metal raceways and metal clad cables, are considered effectively bonded when using threadless couplings and connectors that are \_\_\_\_.
  - a) nonmetallic
  - b) made up of tight
  - c) sealed

d) these are never allowed for bonding

250.92 (B)(3)

8. An accessible means external to enclosures for connecting intersystem \_\_\_\_ conductors must be provided at the service equipment and at the disconnecting means.

- a) bonding
- b) grounding
- c) secondary
- d) a and b

250.94

9. When bonding enclosures, metal raceways, frames, fittings, and other metal noncurrent-carrying parts, any nonconductive paint, enamel, or similar coating must be removed at \_\_\_\_\_.

- a) contact surfaces
- b) threads
- c) secondary
- d) a and b

250.96(A)

10. For circuits over 250 volts-to-ground, electrical continuity can be maintained between a box or enclosure where no oversized, concentric, or eccentric knockouts are encountered, and a metal conduit by \_\_\_\_\_.

- a) threadless fittings for cables with metal sheath
- b) double locknuts on threaded conduit (one inside and one outside the box or enclosure)
- c) fittings that have shoulders that seat firmly against the box with a locknut on the inside or listed fittings identified for the purpose.
- d) all of these

250.97 Ex 1, 2, 3, and 4

11. Regardless of the voltage of the electrical system, the electrical continuity of non-current carrying metal parts of equipment, raceways, and other enclosures in any hazardous (classified) location as defined in Article 500 must be ensured by any of the methods specified in 250.92(B)(2) through (B)(4). One or more of these \_\_\_\_\_ methods must be used whether or not supplementary equipment grounding conductors are installed.

- a) grounded
- b) securing
- c) sealing
- d) bonding

250.100

12. Equipment bonding jumpers on the supply side of the service must be no smaller than the sized shown in \_\_\_\_\_.

- a) Table 250.66
- b) Table 250.122
- c) Table 310.16
- d) Table 310.15(B)(6)

250.102(C)

13. A service is supplied by three metal raceways. Each raceway contains 600 kcmil ungrounded (phase) conductors. Determine the size of the service bonding jumper for each raceway.

- a) 1/0 AWG
- b) 2/0 AWG
- c) 225 kcmil
- d) 500 kcmil

250.102(C), Table 250.66

14. What is the minimum size copper bonding jumper for a service raceway containing 4/0 THHN aluminum conductors?

- a) 6 AWG aluminum
- b) 3 AWG copper
- c) 4 AWG aluminum
- d) 4 AWG copper

250.102 (C) Table 250.66

15. The equipment bonding jumper can be installed on the outside of a raceway providing the length of the run is not more than \_\_\_\_ and the bonding jumper is routed with the raceway.

- a) 12 in.
- b) 24 in.
- c) 36 in.
- d) 72 in.

250.102 (E)

16. The metal water-piping system(s) must be bonded to the \_\_\_\_.

- a) grounded conductor at the service
- b) service equipment enclosure
- c) equipment grounding bar or bus at any panelboard within the building
- d) a or b

250.104(A)(1)

17. A building or structure that is supplied by a feeder must have the interior metal water-piping system bonded with a conductor sized from \_\_\_\_.

- a) Table 250. 66
- b) Table 250.122
- c) Table 310.16
- d) none of these

250.104(A)(3)

18. Exposed structural metal that is interconnected to form a steel building frame that is not intentionally grounded and is likely to become energized, must be bonded to:

- a) The service equipment enclosure
- b) The grounded conductor at the service
- c) The grounding electrode where of sufficient size
- d) any of these

250.104(C)

19. Lightning protection system ground terminals \_\_\_\_ be bonded to the building grounding electrode system.

- a) must
- b) must not
- c) can
- d) none of these

250.106

20. Exposed non-current-carrying metal parts of fixed equipment likely to become energized must be grounded where \_\_\_\_.

- a) within 8 ft vertically or 5 ft horizontally of ground or grounded metal objects
- b) located in wet or damp locations and not isolated
- c) in electrical contact with metal
- d) any of these

250.110(1), (2), and (3)

21. Electrical equipment permanently mounted on skids, and the skids, must be grounded with an equipment bonding jumper sized as required by \_\_\_\_.

- a) 250.50
- b) 250.66
- c) 250.122
- d) 310.15

250.112(K)

22. An equipment grounding conductor run with, or enclosing, the circuit conductors must be \_\_\_\_ or metal raceway as listed in 250.118.

- a) a copper conductor
- b) an aluminum conductor
- c) a copper-clad aluminum conductor
- d) any of these

250.118

23. For flexible metal conduit (FMC) and liquidtight flexible metal conduit (LFMC), an equipment grounding conductor is required regardless of the size of the overcurrent protection if the FMC or LMFC is installed for the reason of \_\_\_\_.

- a) physical protection
- b) flexibility
- c) protection from moisture
- d) communication systems

250.118(5)(d) and (6)(e)

24. Liquidtight flexible metal conduit (LFMC) in  $\frac{3}{4}$  through 1  $\frac{1}{4}$  in. trade sizes can be used as the equipment grounding conductor if the length in any ground return path does not exceed 6 ft and the circuit conductors contained in the conduit are protected by overcurrent devices rated at \_\_\_\_ or less when the conduit is not installed for flexibility.

- a) 15A
- b) 20A
- c) 30A
- d) 60A

250.118(6)(c)

25. Conductors with insulation that is \_\_\_\_ cannot be used for ungrounded or grounded conductors.

- a) green
- b) green with one or more yellow stripes
- c) a or b
- d) white

250.119

26. Equipment grounding conductors for feeder taps must be sized in accordance with \_\_\_\_ based on the ampere rating of the circuit protection device ahead of the feeder, but in no case is it required to be larger than the circuit conductors.

- a) Table 250.66
- b) Table 250.94
- c) Table 250.122
- d) Table 220.19

250.122(G)

27. The equipment conductor must not be smaller than shown in Table 250.122, but it must not be required to be larger than the circuit conductors supplying the equipment.

- a) True
- b) False

250.122(A)

28. When a single equipment grounding conductor is used for multiple circuits in the same raceway or cable, the single equipment grounding conductor must be sized according to \_\_\_\_.

- a) the combined rating of all the overcurrent protection devices
- b) the largest overcurrent protection device of the multiple circuits
- c) the combined rating of all the loads
- d) any of these

250.122(C)

29. The terminal of a wiring device for the connection of the equipment grounding conductor must be identified by a green-colored, \_\_\_\_.

- a) not readily removable terminal screw with a hexagonal head
- b) hexagonal, not readily removable terminal nut
- c) pressure wire connector
- d) any of these

250.126

30. When considering whether equipment is effectively grounded, the structural metal frame of a building is permitted to be used as the required equipment grounding conductor for ac equipment.

- a) True
- b) False

250.136(A)

31. Ranges and clothes dryers for existing branch circuit installations that were installed with the frame grounded by the grounded circuit conductor are allowed to continue this practice if all conditions of the exception to 250.140 are met.

- a) True
- b) False

250.140 Ex

32. A grounded circuit conductor must not be used for grounding non-current-carrying metal parts of equipment on the load side of \_\_\_\_.

- a) the service disconnecting means
- b) the separately derived system disconnecting means
- c) overcurrent protection devices for separately derived systems not having a main disconnecting means
- d) all of these

250.142(B)

33. An \_\_\_\_ must be used to connect the grounding terminal of a grounding-type receptacle to a grounded box.

- a) equipment bonding jumper
- b) equipment grounding jumper
- c) a or b
- d) a and b

250.146

34. An equipment bonding jumper must be used to connect the grounding terminal of a grounding-type receptacle to a grounded box. Where the box is surface-mounted, direct metal-to-metal contact between the device yoke and the box can be permitted to ground the receptacle to the box.

- a) True
- b) False

250.146(A)

35. Receptacle yokes designed and \_\_\_\_ as self-grounding are permitted to establish the bonding path between the device yoke and a grounded outlet box.

- a) approved
- b) advertised
- c) listed
- d) installed

250.146(B)

36. Contact devices or yokes designed and listed as self-grounding are permitted in conjunction with the supporting screws to establish the grounding circuit between the device yoke and flush-type boxes.

- a) True
- b) False

250.146(B)

37. Where circuit conductors are spliced within a box, or terminated on equipment within or supported by a box, any equipment grounding conductors associated with those circuit conductors must be spliced or joined within the box or to the box with devices suitable for the use.

- a) True
- b) False

250.148

38. When equipment grounding conductor(s) are installed in a metal box, an electrical connection is required between the equipment grounding conductor and the metal box, enclosure by means of a \_\_\_\_.

- a) grounding screw
- b) soldered connection
- c) listed grounding device
- d) a or b

250.148(C) and (E)

39. The secondary circuits of current and potential instrument transformer must be grounded where the primary windings are connected to circuits of \_\_\_\_ or more to ground and, where on switchboards, must be grounded irrespective of voltage.

- a) 300V
- b) 600V
- c) 1,000V
- d) 150V

250.170

40. The grounding conductor for secondarily circuits of instrument transformers and for instrument cases must not be smaller than \_\_\_\_ AWG copper.

- a) 18
- b) 16
- c) 14
- d) 12

250.178

#### Article 280 Surge Arresters

41. Line and ground-connecting conductors for a surge arrester must not be smaller than \_\_\_\_ AWG copper.

- a) 14
- b) 12
- c) 10
- d) 8

280.21

#### Article 285 Transient Voltage Surge Suppressors (TVSSs)

42. Article 285 covers surge arresters.

- a) True
- b) False

285.1

43. A TVSS is listed to limit transient voltages by diverting or limiting surge current.

- a) True
- b) False

285.2

44. TVSSs must be marked with their short-circuit current rating, and they must not be installed where the available fault current is in excess of that rating.

- a) True
- b) False

285.6

45. A TVSS can be connected anywhere on the premises wiring system.

- a) True
- b) False

285.21(A)

46. Unless specified elsewhere in the Code, Chapter 3 must be used for voltages of \_\_\_\_.

- a) 600 volts-to-ground or less
- b) 300V between conductors or less
- c) 600V, nominal, or less
- d) 600V RMS

300.2(A)

47. All conductors of a circuit, including the grounded and equipment grounding conductors, must be contained within the same \_\_\_\_.

- a) raceway
- b) cable
- c) trench
- d) all of these

300.3(B), see 300.5(1)

48. In both exposed and concealed locations, where a cable or nonmetallic raceway-type wiring method is installed through bored holes in joists, rafters, or wood members, holes must be bored so that the edge of the holes is \_\_\_\_ the nearest edge of the wood member.

- a) not less than 1 ¼ in from
- b) immediately adjacent to
- c) not less than 1/16 in from
- d) 90° away from

300.4(A)(1)

49. Cables laid in wood notches protection against nails or screws by using a steel plate at least \_\_\_\_ thick, installed before the building finish is applied. A thinner plate that provides equal or better protection may be used if listed and marked.

- a) 1/16 in
- b) 1/8 in
- c) ½ in
- d) none of these

300.4(A)(2)

50. Where NM cable passes through factory or field opening in metal members, it must be protected by \_\_\_\_ bushings or \_\_\_\_ grommets that cover metal edges. The protection fitting must be securely fastened in the opening prior to the installation of the cable.

- a) approved
- b) identified
- c) listed
- d) none of these

300.4(B)(1)

51. Wiring methods installed behind panels that allow access, such as the space above a dropped ceiling, are required to be \_\_\_\_ according to their applicable Articles.

- a) supported
- b) painted
- c) in a metal raceway
- d) all of these

300.4(C)

52. When unable to maintain the minimum required distance from the edge of a wood framing member when installing a cable or nonmetallic raceway parallel to framing member, the cable or raceway must be protected from penetration by screws or nails by a steel plate or bushing at least \_\_\_\_ and of appropriate length and width to cover the area of the wiring. A thinner plate that provides equal or better protection may be used if listed and marked.

- a) ¼ in thick
- b) 1/8 in thick
- c) 1/16
- d) 24 gauge

300.4(D)

53. Where underground conductors and cables emerge from underground, they must be protected by enclosures or raceways to a point \_\_\_\_ above finished grade. In no case can the protection be required to exceed 18 in. below grade.

- a) 3 ft.
- b) 6 ft.
- c) 8 ft.
- d) 10 ft.

300.5(D)(1)

54. What is the minimum cover requirement in inches for direct burial UF cable installed outdoors that supplies power to a 120V, 30A circuit?

- a) 6 in.
- b) 12 in.
- c) 18 in.

d) 24 in.

Table 300.5 Column 1

55. When installing raceways, underground in rigid nonmetallic conduit and other approved raceways, there must be a minimum of \_\_\_\_\_ of cover.

- a) 6 in.
- b) 12 in.
- c) 18 in.
- d) 24 in.

Table 300.5, Column 3

56. UF cable used with a 24V landscape lighting system is permitted to have a minimum cover of \_\_\_\_\_.

- a) 6 in.
- b) 12 in.
- c) 18 in.
- d) 24 in.

Table 300.5, Column 5

57. Direct-buried conductors or cables can be splices or tapped without the use of splice boxes when the splice or tap is made in accordance with 110.14(B).

- a) True
- b) False

300.5(E)

58. Conduits or raceways through which moisture may contact live parts must be \_\_\_\_\_ at either or both ends.

- a) sealed
- b) plugged
- c) bushed
- d) a or b

300.5(G)

59. All conductors of the same circuit are required to be \_\_\_\_\_.

- a) in the same raceway or cable
- b) in close proximity in the same trench
- c) in the same size
- d) a or b

300.5(I), see 300.3(B)

60. Cables or raceways installed using directional boring equipment must be \_\_\_\_\_ for this purpose.

- a) marked
- b) listed
- c) labeled
- d) approved

300.5(K)

61. Which of the following metal parts must be protected from corrosion both inside and out?

- a) Ferrous metal raceways
- b) Metal elbows
- c) Boxes
- d) all of these

300.6(A)

62. Metal raceways, boxes, fittings, supports, and support hardware can be installed in concrete or in direct contact with the earth or other areas subject to severe corrosive influences, where \_\_\_\_\_ approved for the conditions, or where provided with corrosion protection approved for the purpose.

- a) the soil is
- b) made of material
- c) the qualified installer is
- d) none of these

300.6(A)(3)



63. Nonmetallic raceways, cable trays, cablebus, auxiliary gutters, boxes, cables with a nonmetallic outer jacket and internal metal armor or jacket, cable sheathing, cabinets, elbows, couplings, nipples, fittings, supports and support hardware must be made of material \_\_\_\_.

- a) listed for the condition
- b) approved for the condition
- c) both a and b
- d) either a or b

300.6(C)

64. Nonmetallic raceways, cable trays, cablebus, auxiliary gutters, boxes, and cables with a nonmetallic outer jacket must be made of material approved for the condition and where exposed to chemicals, the materials or coatings must be \_\_\_\_.

- a) listed as inherently resistant to chemicals
- b) identified for the specific chemical reagent
- c) both a and b
- d) either a or b

300.6(C)(2)

65. In general, areas where \_\_\_\_ are handled and stored may present severe corrosive conditions, particularly when wet or damp.

- a) laboratory chemicals and acids
- b) acids and alkali chemicals
- c) acids and water
- d) chemicals and water

300.6(D) FPN

66. Raceways must be provided with expansion fittings where necessary to compensate for thermal expansion and contraction.

- a) True
- b) False

300.7(B)

67. Metal raceways, cable armor, and other metal enclosures for conductors must be \_\_\_\_ joined together to form a continuous electrical conductor.

- a) electrically
- b) permanently
- c) metallically
- d) none of these

300.10

68. Where independent support wires of a ceiling assembly are used to support raceways, cable assemblies, and boxes above a ceiling, they must be secured at both ends. Cables and raceways must \_\_\_\_.

- a) be identified for this purpose
- b) not be supported by ceiling grids
- c) not contain conductors larger than 14 AWG
- d) be identified by paint them orange

300.11(A)

69. The independent support wires for wiring in a fire-rated ceiling assembly must be distinguishable from fire-rated suspended ceiling framing support wires by \_\_\_\_.

- a) color
- b) tagging
- c) other effective means
- d) any of these

300.11(A)(1)

70. Raceways are allowed to be used as a means of support when the raceway contains electrical power supply conductors for electrically controlled equipment and the raceway is used to support Class 2 circuit conductors or cables that connect to the same equipment.

- a) True
- b) False

300.11(B)(2)

71. Metal or nonmetallic raceways, cable armors, and cable sheaths \_\_\_ between cabinets, boxes, fittings or other enclosures or outlets.

- a) can be attached with electrical tape
- b) are allowed gaps for expansion
- c) must be continuous
- d) none of these

300.12

72. In multiwire circuits, the continuity of the \_\_\_ conductor must not be dependent upon the device connections.

- a) underground
- b) grounded
- c) grounding
- d) a and b

300.13(B)

73. When the opening to an outlet, junction, or switch pint is less than 8 in. in any dimension, each conductor must be long enough to extend at least \_\_\_ outside the opening of the enclosure.

- a) 0 in.
- b) 3 in.
- c) 6 in
- d) 12 in

300.14

74. A box or conduit body is not required where cables enter or exit from conduit or tube that is used to provide cable support or protection against physical damage. A fitting must be provided on the end(s) of the conduit or tubing to \_\_\_.

- a) allow for the future connection of a box
- b) be used for a future pull point
- c) protect the cable from abrasion
- d) allow the coupling of another section of conduit

300.15(C)

75. Splices and taps are permitted in cabinets or cutout boxes if the conductors, splices, and taps do not fill the wiring space at any cross-section to more than \_\_\_ percent.

- a) 20
- b) 40
- c) 60
- d) 75

300.15(1) and 312.8

76. A bushing is permitted in lieu of a box or terminal where conductors emerge from a raceway and enter or terminate at equipment, such as open switch boards, unenclosed control equipment, or similar equipment.

- a) True
- b) False

300.16(B)

77. The number of conductors permitted in a raceway must be limited to \_\_\_.

- a) permit heat to dissipate
- b) prevent damage to insulation during installation
- c) prevent damage to insulation during removal of conductors
- d) all of these

300.17

78. Pre-wired raceway assemblies are permitted only where specifically permitted in the *Code* for the applicable wiring method.

- a) True
- b) False

300.18(A)

79. Metal raceways must not be \_\_\_\_ by welding to the raceway unless specifically designed to be, or otherwise specifically permitted to be, by the *Code*.

- a) supported
- b) terminated
- c) connected
- d) all of these

300.18(B)

80. A vertical run of 4/01 AWG copper must be supported at intervals not exceeding \_\_\_\_.

- a) 80 ft.
- b) 100 ft.
- c) 120 ft.
- d) 40 ft.

Table 300.19(A)

81. \_\_\_\_ is a nonferrous, nonmagnetic metal that has no heating due to inductive hysteresis heating.

- a) Steel
- b) Iron
- c) Aluminum
- d) all of these

300.20(B) FPN

82. Openings around electrical penetrations through fire-resistant-rated walls, partitions, floors, or ceilings must \_\_\_\_ to maintain the fire resistance rating.

- a) be documented
- b) not be allowed
- c) be firestopped using approved methods
- d) be enlarged

300.21

83. Equipment and devices are permitted within ducts or plenum chambers used to transport environmental air only if necessary for their direct action upon, or sensing of, the \_\_\_\_.

- a) contained air
- b) air quality
- c) air temperature
- d) none of these

300.22(B)

84. One wiring method that is permitted in ducts or plenums used for environmental air is \_\_\_\_.

- a) flexible metal conduit of any length
- b) electrical metallic tubing
- c) armored cable (Type AC)
- d) nonmetallic-sheathed cable

300.22(B)

85. The space above a hung ceiling used for environmental air handling purposes is an example of \_\_\_\_ and the wiring limitations of \_\_\_\_ apply.

- a) a plenum, 300.22(B)
- b) other spaces, 300.22(C)
- c) a duct, 300.22 (B)
- d) none of these

300.22(C) FPN

86. Electric wiring in the air-handling area beneath raised floors for data-processing systems is permitted in accordance with Article 645.

- a) True
- b) False

300.22(D)

Article 310 Conductors for General Wiring

87. Conductors must be insulated except where specifically allowed by the *NEC* to be bare, such as for equipment grounding or bonding purposes.

- a) True
- b) False

310.2(A) Ex

88. In general, the minimum size phase, neutral, or grounded conductor permitted for use in parallel installations is \_\_\_\_\_ AWG.

- a) 10
- b) 1
- c) 1/0
- d) 4

310.4

89. When conductors are run in parallel, the currents should be evenly divided between the individual parallel conductors so that each conductor is evenly heated. This is accomplished by ensuring that each of the conductors within a parallel set has the same \_\_\_\_ and all conductors terminate in the same number.

- a) length
- b) material
- c) cross-sectional area
- d) none of these

310.4

90. It is not the intent of 310.4 to require that conductors of one phase, neutral, or grounded circuit conductor be the same as those of another phase, neutral, or grounded circuit conductor to achieve \_\_\_\_\_.

- a) polarity
- b) balance
- c) grounding
- d) none of these

310.4

91. The minimum size conductor permitted in any building for branch circuits under 600V is \_\_\_\_\_ AWG.

- a) 14
- b) 12
- c) 10
- d) 8

Table 310.5

92. Insulated conductors used in wet locations must be \_\_\_\_\_.

- a) moisture-impervious metal-sheathed
- b) RHW, TW, THHW, THWN, XHHW
- c) listed for wet locations
- d) any of these

310.8(C)

93. Where conductors of different insulation are associated together, the limiting temperature of any conductor must not be exceeded.

- a) True
- b) False

310.10

94. There are four principal determinants of conductor operating temperature, one of which is \_\_\_\_\_ generated internally in the conductor as the result of load current flow.

- a) friction
- b) magnetism
- c) heat
- d) none of these

310.10 FPN No. 1 (2)

95. Letters used to designate the number of conductors within a cable are \_\_\_\_\_.

- a) D- Two insulated conductors laid parallel
- b) M- Two or more insulated conductor twisted spirally

- c) T- Two or more insulated conductors twisted parallel
- d) a and b

310.11(C)

96. TFE-insulated conductors are manufactured in sizes from 14 through \_\_\_\_ AWG.

- a) 2
- b) 1
- c) 2/0
- d) 4/0

Table 310.13

97. Lettering on conductor insulation indicates its intended condition of use. THWN is rated \_\_\_\_.

- a) 75°C
- b) for wet locations
- c) a and b
- d) not enough information

Table 310.13

98. The ampacities listed in the Tables of Article 310 are based on temperature alone and do not take \_\_\_\_ into consideration.

- a) continuous loads
- b) voltage drop
- c) insulation
- d) wet locations

310.15(A)(1) FPN No.1

99. Where six current-carrying conductors are run in the same conduit or cable, the ampacity of each conductor must be adjusted to a factor of \_\_\_\_ percent of its value.

- a) 90
- b) 60
- c) 40
- d) 80

Table 310.15(B)(2)(a)

100. Conductor derating factors do not apply to conductors in nipples having a length not exceeding \_\_\_\_\_.

- a) 12 in.
- b) 24 in.
- c) 36 in.
- d) 48 in.

310.15(B)(2)(a) Ex 3

**05 NEC quiz 102 Answer Sheet**

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

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2. Fill in all fields applicable.
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4. We'll take care of crediting with the state and mailing back to you the quiz results.

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1. Mail in just the answer sheet and keep the quiz for your records.
2. Fill out this form below completely.
3. Applicable fees by check payable to our business name: **GaryKlinka.com**
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Live Support at 920-381-6714 or [tmklinka@hotmail.com](mailto:tmklinka@hotmail.com)

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Attendee's name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

Credential Number \_\_\_\_\_ Phone# \_\_\_\_\_

Course Title and Name 05 Nec Quiz 102 Course ID# 8542

List the name of each credential held by attendee \_\_\_\_\_

\_\_\_\_\_ Credited 3 hrs

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Fax# \_\_\_\_\_ Course Fee \$30

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To be completed by GaryKlinka.com

Attendee passed the course with a greater than 70% score on date \_\_\_\_\_

Instructor Signature \_\_\_\_\_