Title: **Article 314, 334** Test: 4

Course: Electrical Applications Unit: Code CLO: 1

Name ANSWER KEY Station \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall identify the correct answers as they relate to the National Electrical Code.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Test. Grading shall be based on the answer key.

**Instructions**

Select the best answer to each multiple-choice question below.

**Article 314**

1. Metal boxes shall be \_\_\_\_\_\_\_\_\_ per Article 250. (2)
   1. grounded
   2. bonded
   3. a and b
   4. none of these
2. Boxes, and conduit bodies, and fittings installed in wet locations shall be listed for wet locations. (3)
   1. True
   2. False
3. \_\_\_\_\_drainage openings not smaller than 1/8 inch and not larger than ¼ inch in diameter shall be permitted to be installed in the field in boxes conduit bodies listed for in damp or wet locations. (4)
   1. Listed
   2. Approved
   3. Labeled
   4. Identified
4. According to the NEC, the volume of a 3x2x2 inch device box is \_\_\_ in2. (6)
   1. 8
   2. 10
   3. 12
   4. 14
5. Where one or more internal table clamps are present in the box, a single value allow once in accordance with table 314.16(B) shall be made based on the largest conductor present in the box. (11)
   1. True
   2. False
6. For the purposes of determining box fill, each device or utilization equipment in the box which is wider that a single device box counts as two conductors for each \_\_\_\_\_ required for the mounting. (13)
   1. Inch
   2. Kilometer
   3. Gang
   4. Box
7. When calculating box fill, each space within a box installed with a barrier shall be calculated separately. (7)
   1. True
   2. False
8. Conduit bodies containing conductor larger than 6 AWG shall have a cross-sectional area at least twice that of the largest conduit to which they can be attached. (17)
   1. True
   2. False
9. In installations within or behind noncombustible walls or ceilings, the front edge of a box, plaster ring, extension ring, or listed extender employing a flush-type cover shall be set back not more than \_\_\_\_\_ inches from the finished surface. (22)
   1. 1/8
   2. ¼
   3. 3/8
   4. ½
10. Surface extensions shall be made by mounting and mechanically securing an extension ring over the box, unless otherwise permitted. (25)
    1. True
    2. False
11. In completed installation, each outlet box shall have a \_\_\_\_\_. (35)
    1. cover
    2. faceplate
    3. canopy
    4. any of these
12. In straight pulls, the length of the box or conduit body shall not be less than \_\_\_\_\_ times the trade size of the largest raceway. (43)
    1. 6
    2. 8
    3. 12
    4. none of these

**Article 334**

1. Type \_\_\_\_\_ cable is a factory assembly that encloses two or more insulated conductors within a nonmetallic jacket. (1)
   1. AC
   2. MC
   3. NM
   4. a and b
2. Type NM cable can be installed as open runs in dropped or suspended ceilings in other than one- and two-family and multi-family dwellings. (5)
   1. true
   2. false
3. Where type NM cable is run at angles with joists in unfinished basements and crawl spaces, it is permissible to secure cables not smaller than \_\_\_\_\_ AWG conductors directly to the lower edges of the joist. (9)
4. Two, 6
5. Three, 8
6. Three, 10
7. a or b
8. Type NM cable shall closely follow the surface of the building finish or running boards when run exposed. (7)
   1. true
   2. false
9. Grommets or bushings for the protection of Type NM cable installed through or parallel to framing members shall be \_\_\_\_\_ for the purpose. (11)
10. Marked
11. Approved
12. Identified
13. listed
14. Flat type NM cables shall not be stapled on edge. (13)
15. True
16. False
17. Type NM cable shall be permitted to be unsupported where the cable is \_\_\_\_. (15)
18. Fished between access point through concealed spaces in finished building or structure and supporting is impracticable.
19. Not more the 4½ ft. from the last point of cable support to the point of connection to a luminaire or other piece of electrical equipment and the cable and point of connection are within an accessible ceiling in one-, two-, or multifamily dwellings.
20. a and b
21. None of these
22. The insulation temperature rating of conductors in type NM cable shall be \_\_\_\_. (18)
23. 60˚C
24. 75˚C
25. 90˚C
26. 105˚C

**Article 100**

1. According to the NEC, “Automatic” is performing a function without the necessity of \_\_\_. (9)
2. Protection from damage
3. Human intervention
4. Mechanical link
5. All of these
6. An arc-fault circuit interrupter is a device intended to de-energize the circuit when a(n) \_\_ is detected. (6)
7. Overcurrent condition
8. Arc fault
9. Ground fault
10. Harmonic fundamental
11. For a circuit to be considered a multiwire branch circuit, it shall have \_\_\_. (19)
12. Two or more underground conductors with a voltage between them
13. A grounded conductor having equal voltage between it and each underground conductor of the circuit.
14. A grounded conductor connected to the neutral or grounded conductor of the system.
15. All of these
16. A load is considered to be continuous if the maximum current is expected to continue for \_\_\_\_ hour(s) or more. (35)
17. ½
18. 1
19. 2
20. 3