

TRUE/FALSE

1. FMC stands for flexible metal conduit.

ANS: T PTS: 1 REF: Code Discussion

2. PVC rigid nonmetallic conduit (RNC) is not resistant to corrosion from moisture and most chemicals.

ANS: F PTS: 1 REF: Code Discussion

3. Auxiliary gutters use different material than wireway.

ANS: F PTS: 1 REF: Code Discussion

4. When wires are all of the same size and type of insulation, the cross-sectional area of the wires will be identical

ANS: T PTS: 1 REF: Code Discussion

5. The environment around a conductor has no effect on the rate at which the heat produced, by current flow, is removed from the conductor.

ANS: F PTS: 1 REF: Sample Calculations

COMPLETION

1. The length of a PVC rigid nonmetallic conduit changes with the _____.

ANS: temperature

PTS: 1 REF: Code Discussion

2. A continuous load is one that operates for _____ hours.

ANS:

3

three

PTS: 1 REF: Sample Calculations

3. _____ is popular for use where flexibility is needed to connect raceway wiring systems to luminaires and equipment.

ANS:

FMC

Flexible Metal Conduit

PTS: 1 REF: Code Discussion

4. A conductor _____ as current flows through it.

ANS: heats

PTS: 1 REF: Code Discussion

5. Usually, in the case of multiwire feeders and branch-circuits, the _____ conductor is not considered a current-carrying conductor

ANS: neutral

PTS: 1 REF: Sample Calculations

6. The cross-sectional area of the conductors is not permitted to exceed _____ % of the cross-sectional area of the nipple.

ANS:
60
sixty

PTS: 1 REF: Sample Calculations

7. The length of the conduit body shall not be permitted to be less than _____ times the trade diameter of the largest conduit entering the conduit body.

ANS:
eight
8

PTS: 1 REF: Sample Calculations

8. The minimum parallel conductor ampacity is calculated by dividing _____ by the product of the number of sets times the adjustment factor.

ANS: feeder overcurrent rating

PTS: 1 REF: Sample Calculations

SHORT ANSWER

1. What is a nipple?

ANS:
A nipple is conduit or tubing of 24 in. or less.

PTS: 1 REF: Code Discussion

2. According to *Article 314*, where are boxes permitted to be installed?

ANS:
Boxes are permitted behind easily removable panels.

PTS: 1 REF: Code Discussion

3. List one of the three ways discussed in the text that insulation damage may occur.

ANS:

Insulation damage may occur:

- 1) From excessive heat
- 2) From physical damage
- 3) From environmental factors

PTS: 1

REF: Sample Calculations

4. Calculate the amount of heat produced as 10A flows through a conductor with a resistance of 5Ω over a 2 hour period of time.

ANS:

$$\text{Heat} = I^2 \times R \times t$$

$$\text{Heat} = (10A)^2 \times 5\Omega \times 2 = 1000 \text{ Watt-hours}$$

PTS: 1

REF: Sample Calculations

5. What is it called when all conductors are not energized at the same time?

ANS:

This is called load diversity.

PTS: 1

REF: Sample Calculations

6. How is the cross-sectional area of a wireway determined?

ANS:

It is determined by squaring the trade dimension of the wireway.

PTS: 1

REF: Sample Calculations

7. Determine the actual inside area of a wireway with dimensions of 10 in. by 10 in.

ANS:

$$\text{Cross sectional area} = 100 \text{ in}^2$$

$$\text{Actual inside area} = 100 \text{ in}^2 / 0.2 = 500 \text{ in}^2$$

PTS: 1

REF: Sample Calculations