

- c. Keypad locks to which a qualified person has the code in order to unlock the enclosure.
- d. Any of the above**
6. A system bonding jumper is which of the following:
- a. The connection between the grounded circuit conductor and the equipment grounding conductor at a separately derived system**
- b. A wiring system that connects two or more separately derived systems
- c. The connection between the grounded circuit conductor and the equipment grounding conductor at the service
- d. A wiring system that connects a grounded circuit conductor to equipment
7. Type AC cables are allowed for which of the following uses:
- a. In exposed work b. In concealed work
- c. Both A & B** d. None of the above
8. Size 2.0 sq mm copper conductor, type THHN cable is permitted in which of the following applications:
- a. Wet locations b. **Dry locations**
- c. Both of the above d. None of the above
9. For a two-family dwelling unit located at grade level, how many outlets are required, assuming installation is no more than 2,000 mm above grade level:
- a. One outlet at each exterior door
- b. One outlet at the front of the dwelling unit
- c. A total of two outlets
- d. One outlet at the front and one at the back of the unit**
10. A branch circuit that consists of at least two ungrounded conductors with a potential difference between them and an identified grounded conductor which has equal potential between it and each of the ungrounded conductors is considered which of the following:
- a. A split branch circuit b. **A multi-wire branch circuit**
- c. A grounded branch circuit d. None of the above
11. A single open conductor which does not serve as a service entrance cable must be installed at which of the following depths:
- a. Not less than 3,100 mm from grade level**
- b. A minimum of 2,000 mm from grade level
- c. Not more than 3,100 mm from grade level
- d. Not less than 2,000 mm from grade level unless encased in concrete
12. If open conductors are exposed to physical damage, they must be installed in which of the following:
- a. Rigid metal conduit b. **Rigid nonmetallic conduit**
- c. Intermediate metal conduit d. Any of the above
13. Concealed knob-and-tube wiring is not permitted in which of the following applications:
- a. Commercial garages** b. Motion picture studios
- c. Hazardous classified locations d. All of the above

14. Rigid metal conduit shall be permitted in which of the following installations:
- a. **Any type of occupancy**
 - b. Corrosive environments
 - c. Wet locations
 - d. All of the above
15. An insulated conductor assembly with fittings and conductor terminations that is completely enclosed in a ventilated protective metal housing is called which of the following:
- a. **A raceway**
 - b. A busbar
 - c. A cablebus
 - d. A busway
16. A cablebus shall not be used for which of the following:
- a. **Branch circuits**
 - b. Feeders
 - c. Service cables
 - d. None of the above
17. Unless identified otherwise, a busway shall not be installed in which of the following locations:
- a. Outside
 - b. **In wet locations**
 - c. In damp locations
 - d. All of the above
18. Branches from busways shall be permitted to use which of the following wiring methods:
- a. Type MC and Type AC cable
 - b. **Type RMC and Type FMC conduits**
 - c. Rigid nonmetallic conduit and electrical nonmetallic tubing
 - d. All of the above
19. **30.** Which of the following means shall be installed to remove condensed moisture for low points in a busway run:
- a. **Drainage plugs**
 - b. Filter drains
 - c. Either of the above
 - d. Neither-busway runs are not permitted to have low points
20. If a neutral bus is required, it shall be sized to carry all neutral load current and shall meet which of the following stipulations:
- a. Be of adequate size to carry harmonic currents
 - b. **Have an adequate momentary rating consistent with any system requirements**
 - c. Have a short-circuit rating consistent with system requirements
 - d. All of the above
21. A sheet metal auxiliary gutter may be used for which of the following applications:
- a. **To supplement wiring spaces at switchboards**
 - b. To enclose overcurrent devices
 - c. In outdoor installations only
 - d. None of the above
22. Nonmetallic auxiliary gutters installed outdoors shall be marked indicating which of the following:
- a. "Suitable for exposure to sunlight"

- b. "Suitable for use in wet locations"**
 - c. Conductor temperature ratings
 - d. All of the above

- 23. Intermediate metal conduit shall be permitted in which of the following installations:
 - a. Any type of occupancy**
 - b. Corrosive environments
 - c. Wet locations
 - d. All of the above

- 24. IMC shall be permitted for use as which of the following:
 - a. An equipment grounding conductor
 - b. An unsupported vertical riser from fixed equipment**
 - c. Both of the above
 - d. None of the above

- 25. Underground feeder cable shall be prohibited for which of the following installations:
 - a. In hoistways**
 - b. In theaters
 - c. In commercial garages
 - d. All of the above

- 26. Underground feeder cable shall be permitted for which of the following applications:
 - a. In hoistways
 - b. In theaters**
 - c. In commercial garages
 - d. All of the above

- 27. A nonmetallic extension shall consist of which of the following installation requirements:
 - a. A continuous, unbroken length of assembly must be used**
 - b. The assembly shall not contain splices
 - c. The extension assembly can not have exposed conductors between fittings
 - d. All of the above

- 28. Unless otherwise prohibited, type NMC cable is permitted for which of the following applications:
 - a. In outside masonry block walls**
 - b. In exposed work
 - c. In moist, damp or corrosive locations
 - d. All of the above

- 29. Type NMS cable is permitted for which of the following applications:
 - a. Corrosive locations exposed to fumes or vapors
 - b. Embedded in masonry**
 - c. Exposed work in normally dry locations
 - d. All of the above

- 30. Type MI cable shall not be used for which of the following applications:
 - a. Where embedded in plaster or concrete**
 - b. As service cabling
 - c. Attached to cable trays

- d. None of the above
31. Type FCC cabling shall be approved for which of the following uses:
- a. Appliance branch circuits
 - b. General purpose branch circuits that do not exceed 30 amperes**
 - c. Individual branch circuits that do not exceed 20 amperes
 - d. All of the above
32. Which of the following statements is true for FCC cable systems:
- a. Unused cable runs and associated cable connectors may be left in place and energized.
 - b. New cable connectors must be used to make alterations at new connection points.**
 - c. All of the above
 - d. None of the above
33. FC cable assemblies are permitted to be used in which of the following applications:
- a. As branch circuits to supply tap devices for small appliances not to exceed 30 amps
 - b. In wet locations**
 - c. In damp locations
 - d. All of the above
34. Armored cable is permitted for use in which of the following installations:
- a. Dry, damp, and wet locations**
 - b. Embedded in plaster finish on brick in dry locations
 - c. Both of the above
 - d. None of the above
35. Nonmetallic boxes shall only be used for which of the following installations:
- a. Concealed knob-and-tube wiring systems
 - b. Single-dwelling or two-family wiring systems**
 - c. Both of the above
 - d. None of the above
36. Conductors run in parallel in each phase, polarity, neutral, or grounded circuit conductor must comply with which of the following:
- a. Be terminated in the same manner and have the same insulation type**
 - b. Have the same size circular mil area
 - c. Be of the same length and conductor material
 - d. All of the above
37. In a situation where more than one calculated ampacity could apply to a circuit length, which of the following values shall be used:
- a. The lowest
 - b. 25% of the combined ampacity**
 - c. An average of the combined ampacities
 - d. None of the above
38. Raceways that are exposed to a variety of temperatures shall be which of the following:

- a. **Grounded**
 - b. Weatherproof
 - c. Bonded
 - d. Sealed
39. An assembly of units and associated fittings that form a rigid structural system used to support cables and raceways is considered which of the following:
- a. A wireway
 - b. **A wiring assembly**
 - c. A cable tray
 - d. A bus
40. A pliable raceway has which of the following characteristics:
- a. It requires a manual or automatic bender to ensure safe bends
 - b. **It can be bent by hand without requiring any other assistance**
 - c. It is flexible
 - d. None of the above
41. If a nonmetallic surface raceway is used, the installation must meet which of the following conditions:
- a. The building must be used for offices
 - b. **The building cannot exceed four floors**
 - c. Both of the above
 - d. None of the above
42. If there are 7 current-carrying conductors in a raceway, then the individual ampacity of each conductor must be reduced by which of the following:
- a. 70% because of the number of conductors
 - b. **30% because all conductors are current-carrying**
 - c. 80% of the continuous load
 - d. 20% of the continuous load
43. The following wiring method is approved to be installed inside a duct used for vapor removal and ventilation of commercial type equipment:
- a. **EMT**
 - b. Nonmetallic sheathed cable
 - c. Rigid steel conduit
 - d. None of the above
44. When conductors of different systems are installed in a common raceway or cable the derating factors used shall be which of the following:
- a. Applied only to the number of power and lighting conductors
 - b. **Be increased by one over the total derating factor**
 - c. Be at least 50% of the highest rated cable
 - d. None of the above
45. Screws used to mount knobs shall be long enough to penetrate the wood in accordance with which of the following:
- a. **At a depth which is twice the height of the knob**
 - b. At thickness at least twice the thickness of the screw
 - c. At a depth at least one-half the height of the knob
 - d. None of the above
46. When calculating the number of conductors in a box, a conductor running through the box shall be counted as which of the following:
- a. Zero
 - b. **One**

c. Two

d. Three

47. When installed in raceways, conductors which are #8 AWG or larger shall meet which of the following requirements:
- a. Not be insulated
 - b. Be stranded**
 - c. Both of the Above
 - d. Either of the above
48. When a conductor is installed in conduit exposed to direct sunlight and in close proximity to a rooftop, under certain circumstances it can experience which of the following:
- a. A temperature rise of 30 degrees F above the ambient temperature on which the conductor ampacity is based**
 - b. 10 degrees C above the conductor temperature rating
 - c. A swelling in the conductor insulation
 - d. Cable stretch
49. For fixed electric space heating equipment consisting of resistance elements with a motor, the branch circuit conductor ampacity and the overcurrent rating of the protective device that supplies the equipment shall not be less than which of the following:
- a. 100% of the total heating equipment load
 - b. 125% of the total motor load
 - c. 125% of the total load of the motor and the heaters**
 - d. The combined ampacity of all of the equipment
50. The disconnection means for fixed appliances within a ten-unit apartment building must be in which of the following locations:
- a. Inside each individual dwelling unit
 - b. In the main mechanical room of the building
 - c. In an accessible common location within the building
 - d. Within each individual unit or on the same floor in the building**