

1. For service entrance conductors, the minimum size of copper wires the code allows is _____.
a. 3.5 mm² b. 5.5 mm² c. 8.0 mm² d. 14 mm²
2. The maximum number of disconnects the code allows per service grouped in any one location is _____.
a. 4 b. 6 c. 8 d. 10
3. In general, switches shall be so wired that all switching is done in the _____ conductor.
a. grounded b. ungrounded c. both a and b d. neither a nor b
4. When circuit breaker are installed in enclosed switchboards, they are usually derated to a certain percentage. What is this percentage?
a. 60% b. 80% c. 50% d. 70%
5. Which of the following requires a moisture seal at all points of termination?
a. underplaster extensions b. bare conductor feeders
c. liquidtight flexible metal conduit d. mineral-insulated cable
6. For a feeder supplying household cooking equipment and electric clothes dryers the maximum unbalanced load on the neutral conductor shall be considered as _____ of the load on the ungrounded conductors.
a. 40% b. 50% c. 70% d. 80%
7. A _____ is a protective device for limiting surge voltages by discharging or bypassing surge current, and it also prevents continued flow of follow current while remaining capable of repeating these functions.
a. surge arrester b. auto fuse c. fuse d. circuit breaker
8. No swimming pool lighting fixtures shall be installed for operation on supply circuits over _____ volts between conductors.
a. 24 b. 50 c. 120 d. 150
9. Service conductors between the street main and the first point of connection to the service entrance run underground is known as the service _____.
a. drop b. loop c. lateral d. cable
10. EMT installed in a wet location, shall have its coupling and connectors _____.
a. protected against corrosion b. corrosion resistant
c. raintight type d. none of these
11. Dual-voltage motors that have a different locked-rotor kva per horsepower on the two voltages shall be marked with the code letter for the voltage giving the _____ locked-rotor kva per horsepower.
a. highest b. average c. lowest d. normal
12. Conductor A.W.G. numbers vary _____ to the ampacity.
a. inversely b. proportionally c. directly d. bi-laterally
13. Type TC power and control cable may be used _____.
a. in outdoor locations when supported by a messenger cable
b. as open cable on brackets
c. where exposed by physical damage
d. none of these

14. Raceways on the outside of buildings shall be _____.
a. watertight and arranged to drain b. **weatherproof and covered**
c. raintight and arranged to drain d. rainproof and guarded
15. Receptacles mounted on _____ need not be grounded.
a. outdoor circuits b. garage walls c. **portable generators** d. electric ranges
16. Which of the following may not be used in damp or wet locations?
a. AC armored cable b. EMT c. **open wiring** d. rigid steel conduit
17. The ampacity of a 125 mm² IGS cable is _____ amperes.
a. **119** b. 168 c. 215 d. 255
18. Which of the following is the maximum allowable rating of a permanently connected appliance where the branch overcurrent device is used as the appliance disconnecting means?
a. **1/8 hp** b. 1/4 hp c. 1/2 hp d. 1 hp
19. Elevator traveling cables for operating _____ circuits shall contain nonmetallic fillers as necessary to maintain concentricity.
I. signal II. control
a. I only b. II only c. **both I and II** d. neither I nor II
20. How would you seal unused ko's in panels and boxes?
a. cardboard b. duct seal
c. tape d. **metal plugs and plates**
21. Liquidtight flexible conduit shall not be permitted _____.
a. in hazardous locations
b. in high temperature areas
c. in exposed and concealed work
d. **where installations requires flexibility or protection from liquids, vapors or solids**
22. Hoistway is a _____ in which an elevator or dumbwaiter is designed to operate.
a. shaftway b. hatchway c. well hole d. **all of these**
23. Where devices containing disconnecting means are mounted out of reach, suitable means shall be provided to operate the disconnecting means from the floor. Which of the following is permitted?
a. **devices cannot be mounted out of reach** b. sticks (hook)
c. ladders d. no method is permitted
24. _____ is defined as properly localizing a fault condition to restrict outages to the equipment affected, accomplishing by choice of selective fault protective devices.
a. monitoring b. **coordination** c. choice selection d. fault device
25. Conductors for festoon lighting shall be of the _____ type.
I. thermoplastic II. rubber covered III. shielded
a. I only b. I or II only c. II or III only d. **I, II, or III**
26. A receptacle outlet installed outdoors shall be located so that _____ is not likely to touch the outlet cover or plate.
a. persons b. **water accumulation**
c. metal d. none of these

27. Metal enclosures to protect _____ from physical damages shall not be required to be grounded.
- service conductors
 - feeders
 - cable assemblies**
 - none of these
28. _____ switches shall be used for capacitor switching.
- Isolation
 - Group-operated
 - Shunt**
 - High-voltage
29. The secondary circuits of wound-rotor AC motors, including conductors, controllers, resistors, etc. shall be considered as protected against overload by the _____.
- disconnect
 - controller
 - breaker
 - motor-overload device**
30. Branch circuit conductors supplying a single motor shall have an ampacity not less than _____ percent of the motor full-load current rating.
- 80
 - 100
 - 115
 - 125**
31. Conductors supplying two or more motors shall have an ampacity equal to the sum of the full-load current rating of all the motors plus _____ percent of the highest rated motor in the group.
- 15
 - 25**
 - 40
 - 50
32. _____ plugs driven into holes in masonry, concrete, plaster, or similar materials shall not be used.
- metal
 - plastic
 - leather
 - wooden**
33. Where conductors are adjusted to compensate for voltage drop, equipment grounding conductors, where required, shall be adjusted proportionally according to _____.
- diameter
 - cross section area**
 - circular mil area
 - circumference
34. Service entrance cables, where subject to physical damages, shall be protected in which of the following?
- EMT
 - IMC
 - rigid metal conduit
- III only
 - II and III
 - I, II and III**
 - I and III
35. Operation at loads, and intervals of time, both of which may be subject to wide variation is the definitions of _____.
- varying duty**
 - demand factor
 - cycle
 - periodic duty
36. Underground cable installed under a building shall be in a _____ that is extended beyond the outside walls of the building.
- sleeve
 - duct bank
 - gutter**
 - raceway
37. A unit of an electrical system which is intended to carry but not utilize electric energy would be a _____.
- light bulb
 - snap switch
 - device
 - receptacle
- I only
 - III only
 - I, II and IV
 - II, III, and IV**
38. _____ boxes shall not be used where conduits or connectors requiring the use of locknuts or bushings are to be connected to the side of the box.
- round**
 - shallow
 - device
 - gang

39. Lampholders installed over highly combustible material shall be of the _____ type.
a. porcelain b. low smoke c. switched d. **unswitched**
40. When an outlet is removed from a cellular metal floor raceway, the sections of circuit conductors supplying the outlet shall be _____.
a. taped b. **dead-ended**
c. shorted together d. removed from the raceway
41. Circuits used only for the operation of fire alarm, other protective signaling systems, or the supply to fire pump equipment _____ to be connected on the supply side of the service overcurrent device where separately provided with overcurrent protection
a. **shall be permitted** b. shall not be permitted
c. not stated in the code d. not required by the Code
42. Class III locations are those that are hazardous because of _____.
a. the presence of combustible dust
b. over 2500 mm depth of water
c. flammable gases or vapors may be present in the air
d. **the presence of easily ignitable fibers or flyings**
43. The maximum number of quarter bends in one run of EMT is _____.
a. two b. **four** c. five d. none of these
44. Which of the following electrical conductor has the highest resistance
a. 3.5 mm^2 b. 8.0 mm^2 c. **2.0 mm^2** d. 5.5 mm^2
45. In the schedule of loads for motor circuits, which of the following is NOT included?
a. Type of motor
b. Motor as numbered or identified in the power layout
c. **Motor's manufacturer**
d. Number of phase
46. What is the allowable ampacity of THW insulated copper conductor with an area of 8.0 mm^2 and exposed to an ambient temperature of 30°C ?
a. **45 A** b. 20 A c. 30 A d. 60 A
47. If the project is extensive and requires more time for checking and for computations of fees, the issuance of the electrical permit need not be issued immediately. However, the delay shall not be longer than how many working days?
a. 7 b. 6 c. **5** d. 8
48. Location which are hazardous because of the presence of combustible dust.
a. Class I b. **Class II** c. Class III d. Class IV
49. Operation at substantially constant load for an indefinitely long time.
a. periodic duty b. intermittent duty c. **continuous duty** d. short time duty
50. The minimum insulation level for the neutral conductors of solidly grounded systems shall be _____.
a. **600 V** b. 300 V c. 500 V d. 1,000 V