2020 Master Code Practice Exam - 100 Question

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1. Type MV cable (Medium Voltage) shall be permitted for use on power systems rated up to and including 35,000 volts, nominal, in which of these circumstances:

    A. In wet or dry locations
    B. direct buried
    C. in messenger-supported wire
    D. all of the above

2. Using the Standard Method, what is the calculated service rating for a 1500 square feet dwelling with the following:

    (2) 20-A small appliance circuits
    (1) 20-A laundry circuit
    (2) 4-kW wall-mounted ovens
    (1) 5.1-kW counter-mounted cooking unit
    (1) 4.5-kW water heater, a 1.2 kW dishwasher
    (1) 5-kW clothes washer and dryer
    (6) 7-A, 230-V room air-conditioning units
    (1) 1.5-KW permanently installed bathroom space heater

    Note - use the column C method, rather than the column A method for this specific problem

    A. 115A
    B. 153A
    C. 162A
    D. 175A

3. Where CNG or LNG dispensers are installed beneath a canopy or enclosure, all electrical equipment installed beneath the canopy or enclosure shall be suitable for _____ hazardous (classified) locations.

    A. Class I, Division 1
    B. Class I, Division 2
    C. Class II, Division 1
    D. Class II, Division 2

4. The ampacity of the supply conductors for an individual resistance welder that can be operated at different times at different values of primary current or duty cycle shall not be less than _____ of the rated primary current for seam and automatically fed welders.

A. 25%
B. 75%
C. 70%
D. 80%

5. Where heating equipment is supplied by more than one source, feeder, or branch circuit, the disconnecting means shall be _____.

    A. grouped and identified as having multiple disconnecting means
    B. located within 10 ft of equipment
    C. terminated to an equipment grounding conductor originating at the service
    D. all of these

6. The connection of an Energy Storage System (ESS) that operates in parallel with other ac sources shall use inverters that are listed and identified as interactive.

    A. active
    B. reactive
    C. non-active
    D. interactive

7. In a major repair garage where natural gas vehicles are repaired, the area within 18 inches of the ceiling is considered what classification?

    A. Class I, Division 1
    B. Class I, Division 2
    C. Class II, Division 1
    D. Class II, Division 2

8. Calculate the maximum demand load for a single branch circuit supplying a counter-mounted cooking unit and two wall-mounted ovens, all located in the same room. The counter-mounted unit has a nameplate rating of 6 kW, and each wall-mounted oven has a rating of 4 kW.

    A. 7.7kW
    B. 8.8kW
    C. 11kW
    D. 14kW

9. A bank has a total square footage of 25,000 sq-ft, and there are 250 receptacles installed. Determine the largest receptacle load to be applied to the total demand load.

    A. 45,000VA
    B. 46,000VA
    C. 50,000VA
    D. 55,000VA

10. A restaurant has all electric appliances, a connected lighting load that includes a sign, totaling 50,000 VA.

The electrical service is rated at 120/208V, three-phase.
The restaurant contains the following loads:
120-volt loads
60 duplex receptacles
100 ft multi-outlet assembly (simultaneous rated)
1 broiler 5 kW
2 deep fryers 5.5 kW
1 freezer 3,400 VA
1 booster heater 1,500 VA
1 coffee service machine 3,500 VA
1 dishwasher 3,500 VA
208-volt loads
1 walk-in cooler 6,400 VA
1 water heater 4,800 VA
1 oven 20 kW
1 range 15 kW
2 convection ovens 8kW
15kW electric heater
14 kW AC
3 exhaust fans 2.4 amperes
1 cooktop 10kW
2 10kw heating units.

What is the total demand load for the restaurant?

A. 122,700VA
B. 160,000VA
C. 162,940VA
D. 214,550VA

11. What are the primary and secondary overcurrent protection devices for a 75kVA three-phase, 480V/208Y transformer?

A. 125A primary, 300A secondary
B. 150A primary, 300A secondary
C. 225A primary /300A secondary
D. 350A primary, 320A secondary

12. A phase converter with a nameplate single-phase input rating of 100 FLA, protecting variable loads, shall have overcurrent protection set at not more than _____.

A. 100A
B. 125A
C. 150A
D. 225A

13. What is the maximum size overcurrent protection device required to protect 14 AWG copper conductors used for a pump motor control-circuit that is protected by a motor branch circuit protection device and extends beyond the enclosure?

    A. 15A
    B. 20A
    C. 45A
    D. 100A

14. Aircraft energizers shall be designed and mounted such that all electrical equipment and fixed wiring will be at least _____ above floor level.

    A. 6 inches
    B. 12 inches
    C. 18 inches
    D. 24 inches

15. Permanently attached power supply cable(s) for overhead gantries shall be provided with _____ upon exposure to strain that could result in either cable damage or separation from the power delivery device and exposure of live parts.

    A. arc-fault protection,
    B. ground-fault interrupter protection,
    C. a means to energize the cable conductors and power service delivery device
    D. a means to de-energize the cable conductors and power service delivery device

16. A mobile home floor is 70 ft by 10 ft and has two small appliance circuits; a 1000-VA, 240-V heater; a 200-VA, 120-V exhaust fan; a 400-VA, 120-V dishwasher; and a 7000-VA electric range.

    A. 30A
    B. 40A
    C. 50A
    D. 60A

17. Each conductor of a lead-in from an outdoor antenna shall be provided with a(n)____.

    A. grounding electrode
    B. equipment grounding conductor
    C. listed antenna discharge unit
    D. listed disconnecting means

18. An energy management system shall not override the load shedding controls for the following:

    A. Fire Pumps
    B. Emergency Systems
    C. Legally Required Standby Systems
    D. All of these

19. What are the minimum size THWN conductors required to feed the primary side of a 112.5kVA three-phase 480V/208V transformer?

    A. 1/0 THWN Primary, 400 kcmil THWN Secondary
    B. 2/0 THWN Primary, 500 kcmil THWN Secondary
    C. 3/0 THWN Primary, 550 kcmil THWN Secondary
    D. 4/0 THWN Primary, 600 kcmil THWN Secondary

20. On a property where flammable liquids are received by a pipeline and are blended in bulk and stored, the area within 3 ft of the edge of outdoor equipment, extending in all directions, shall be considered a _____ environment

    A. Class I, Division 1
    B. Class I, Division 2
    C. Class II, Division 1
    D. Class II, Division 2

21. The rating of the overcurrent protective device for the circuit supplying the industrial control panel shall not be greater than the sum of the largest rating of the branch-circuit short-circuit and ground-fault protective device provided with the industrial control panel, _____, plus the sum of the full-load currents of all other motors and apparatus that could be in operation at the same time.

    A. plus 80% of the FLA rating of all resistance heating loads
    B. plus 150% of the FLA rating of all resistance heating loads
    C. plus 125% of the FLA rating of all resistance heating loads
    D. plus 100% of the FLA rating of all resistance heating loads

22. Fire alarm circuits shall be identified at terminal and junction locations in a manner that _____ during testing and servicing of other systems.

    A. allows emergency workers to easily find the means of disconnection
    B. identifies the nominal voltage rating of the system
    C. is legible
    D. helps to prevent unintentional signals on fire alarm circuit(s)

23. Underground wiring in motor fuel dispensing facilities shall be installed in threaded rigid metal conduit, or threaded steel intermediate metal conduit, or where buried under not less than _____ of cover, shall be permitted to be installed in Type PVC, Type RTRC, or Type HDPE conduit.

    A. 1 foot
    B. 2 feet
    C. 3 feet
    D. 6 feet

24. A thermal barrier shall be required if the space between the resistors and reactors and any combustible material is less than_____.

A. 6 inches
B. 12 inches
C. 18 inches
D. 24 inches

25. As a fixed wiring method encased in _____ inch(es) of concrete, nonmetallic raceways shall be permitted to be used where installed in an occupancy where 100 or more people gather or assemble.

A. ½
B. 1
C. 2
D. 3

26. Type ITC cable shall not be installed on circuits operating at more than_____.

A. 150V or more than 5A
B. 250V or more than 5A
C. 600V or more than 10A
D. 1,000V or more than 10A

27. Power-limited control power sources, other than transformers, shall be protected by overcurrent devices rated at not more than _____ of the VA rating of the source divided by the rated voltage.

A. 200%
B. 167%
C. 125%
D. 100%

28. Where capacitors are installed in motor circuits, conductors shall not be less than _____ of the rated current of the capacitor.

A. 80%
B. 115%
C. 125%
D. 135%

29. A three-phase 230V wound-rotor motor rated at 15HP requires short-circuit and ground-fault protection. The manufacturer calls for a non time delay fuse to protect the motor. What size fuse shall be selected?

A. 40A
B. 45A
C. 50A
D. 60A

30. An industrial machine's name plate shall be attached to the control equipment enclosure or machine and shall be plainly visible after installation. The nameplate shall include:

    A. supply voltage, number of phases, frequency, and FLA
    B. minimum ampere rating of the short-circuit and ground-fault protective device
    C. ampere rating of largest motor, from the motor nameplate, or load
    D. efficiency and power factor rating

31. Where the outer sheath of a mineral-insulated, metal-sheathed cable is made of _____, it shall provide an adequate path to serve as an equipment grounding conductor.

    A. copper
    B. aluminum
    C. nickel
    D. steel

32. Luminaires shall be constructed, installed, or equipped with shades or guards so that combustible material is not subjected to temperatures in excess of _____.

    A. 90°F
    B. 104°F
    C. 194°F
    D. 200°F

33. Collector rings on electrically driven irrigation machines, where used for control and signal purposes, shall have a current rating not less than _____ of the full-load current of the largest device served plus the full-load current of all other devices served.

    A. 100%
    B. 125%
    C. 175%
    D. 200%

34. The branch-circuit rating for an appliance that is a continuous load shall not be less than _____ of the marked rating.

    A. 75%
    B. 83%
    C. 100%
    D. 125%

35. Raceways shall be used only as a means of support for other raceways where the raceway _____.

    A. is installed as a complete assembly
    B. contains only 600V conductors
    C. is identified as a means of support
    D. is installed above a grid ceiling

36. On a 4-wire, delta-connected system where the midpoint of one phase winding is grounded, only the conductor or busbar having the higher phase voltage to ground shall be durably and permanently marked by an outer finish that is _____ in color or by other effective means.

    A. orange
    B. yellow
    C. purple
    D. white

37. What is the allowable ampacity for a flexible 3-conductor Type SO-cord with three current-carrying 12 AWG conductors?

    A. 18A
    B. 20A
    C. 25A
    D. 30A

38. Heat-resistant thermoplastic-insulation covering 8 AWG conductors are listed for use in _____ locations.

    A. wet
    B. outdoor
    C. indoor
    D. dry and damp

39. Multi-wire branch circuits that supply two pieces of utilization equipment, and are not protected by an overcurrent device which opens all ungrounded conductors simultaneously, shall supply only _____.

    A. Line-to-ground loads
    B. Line-to-neutral loads
    C. Three-phase loads
    D. Line-to-line loads

40. Overhead conductors for festoon lighting shall not be smaller than 12 AWG unless the conductors are _____.

    A. listed for use in damp locations
    B. of the type THWN, THHN, or XHHW
    C. supported by messenger wires
    D. no longer than 50 feet in length

41. Tap conductors not over _____ feet long and do not extend beyond the switchboard, switchgear, panelboard, disconnecting means, or control devices they supply shall be permitted to be tapped without overcurrent protection at the tap.

    A. 25
    B. 15
    C. 10

D. 5

42. Where tap conductors supply a transformer and the total length of one primary plus one secondary conductor, excluding any portion of the primary conductor that is protected at its ampacity, is not over 25ft, conductors shall _____.

    A. be tapped without overcurrent protection at the tap
    B. be protected at 125% the ampacity of the feeder being tapped
    C. shall be protected at 200% the ampacity of the feeder being tapped
    D. be permitted to be tapped, without overcurrent protection at the tap

43. The minimum overhead clearance from water level to an insulated overhead 240-volt feeder traveling over a pool and supported on a steel messenger cable is _____ feet.

    A. 14.5
    B. 22.5
    C. 25
    D. 27

44. Copper conductors, for each phase, polarity, neutral, or grounded circuit shall be permitted to be connected in parallel only in sizes _____.

    A. 1/0 AWG and larger
    B. 2/0 AWG and larger
    C. 1 AWG and larger
    D. 250 Kcmil and larger

45. Receptacle outlets in or on floors shall not be counted as part of the required number of receptacle outlets unless located within _____ inches of the wall.

    A. 6
    B. 12
    C. 18
    D. 24

46. Conductors installed in RMC in a trench below 2 inches of thick concrete must have a minimum cover of _____inches.

    A. 6
    B. 12
    C. 18
    D. 24

47. In a grounded system, if the source of the separately derived system and the first disconnecting means are located in separate enclosures, a supply-side bonding jumper shall be installed with the circuit conductors from the source enclosure to the first disconnecting means enclosure. A supply-side bonding jumper shall not be required to be larger than the _____ conductors.

A. grounded
B. grounding electrode equipment
C. grounding
D. derived ungrounded

48. The service conductor ampacity for a single-phase 240/120V Single-Family Dwelling rated 100-400A shall be permitted to have an ampacity not less than _____ of the service rating.

A. 80%
B. 83%
C. 100%
D. 125%

49. At all points where the armor of _____ cable terminates, a fitting shall be provided to protect wires from abrasion, unless the design of the outlet boxes or fittings is such as to afford equivalent protection, and, in addition, an insulating bushing or its equivalent protection shall be provided between the conductors and the armor.

A. MC
B. NM
C. UF
D. AC

50. Optional feeder and service load calculations shall be permitted for a dwelling unit having the total connected load served by a single 120/240-volt or 208Y/120-volt set of _____ service or feeder conductors with an ampacity of 100 or greater.

A. 3-wire
B. 2-wire
C. parallel
D. independent

51. Receptacles installed in a kitchen to serve countertop surfaces shall be supplied by not fewer than _____ small-appliance branch circuit(s).

A. One
B. Two
C. Three
D. Four

52. Conductors that supply one or more welders shall be protected by an overcurrent device rated or set at not more than _____ percent of the conductor ampacity.

A. 100
B. 125
C. 150
D. 200

53. Communications, radio, and television coaxial cables shall be permitted at a height of not less than _____ above swimming and wading pools, diving structures, and observation stands, towers, or platforms.

    A. 10 ft
    B. 12 ft
    C. 18ft
    D. 25ft

54. A 120-208V 3-phase panel with exposed live parts on one side, and no live or grounded parts on the other side of the working space, must have a minimum clear working distance of _____ in front of panel.

    A. 3 feet
    B. 3 feet 6 inches
    C. 4 feet
    D. 4 feet 6 inches

55. The total cross-sectional area of a 2 inch EMT conduit is 3.356 square inches and has (6) 12 AWG conductors inside it. What is the total area allowed to be taken up by all conductors in this conduit?

    A. 1.342 square inches
    B. 1.566 square inches
    C. 2.013 square inches
    D. 2.343 square inches

56. In an electrical room with exposed 480/277V live parts on one side of the working space and grounded parts on the other side of the working space, the minimum depth of working space in front of this equipment shall be _____.

    A. 3 feet
    B. 3 feet 6 inches
    C. 4 feet
    D. 4 feet 6 inches

57. The supply-side bonding jumper for a 240V single phase service fed with (2) parallel 300 kcmil Aluminum ungrounded conductors is _____ aluminum.

    A. 2 AWG
    B. 4 AWG
    C. 1/0
    D. 3/0

58. A concrete-encased electrode shall consist of at least 20 feet of:

    A. Insulated copper conductor not smaller than 4 AWG
    B. Bare copper conductor not smaller than 6 AWG
    C. Bare copper conductor not smaller than 4 AWG

D. Insulated copper conductor not smaller than 6 AWG

59. _____ where the tubing is terminated in listed fittings and the circuit conductors contained in the tubing are protected by overcurrent devices rated at 20A or less are allowed to be considered an equipment grounding conductor.

    A. Flexible metallic tubing
    B. Electrical Metallic Tubing
    C. Electrical Nonmetallic Tubing
    D. Flexible Nonmetallic Tubing

60. The operating handle of a circuit breaker shall be permitted to be accessible _____ opening a door or cover.

    A. while
    B. after
    C. without
    D. before

61. Type MC cable that contains a(n) _____ or uninsulated equipment grounding conductor can be used as an EGC.

    A. insulated
    B. steel
    C. shielded
    D. waterproof

62. In a(n) _____ system, electrical equipment, wiring, and other electrically conductive material likely to become energized shall be installed in a manner that creates a low-impedance circuit from any point on the wiring system to the electrical supply source to facilitate the operation of overcurrent devices should a second ground fault from a different phase occur on the wiring system.

    A. 1-phase 3-wire
    B. 3-phase 4-wire
    C. grounded
    D. ungrounded

63. Overcurrent protection for supply conductors as part of a Modular Data Center, shall:

    A. consist of a single circuit breaker or set of fuses
    B. at no point be considered either as feeders or as taps
    C. be marked “OVERCURRENT PROTECTION PROVIDED AT MDC SUPPLY TERMINALS.”
    D. not require supplementary overcurrent protection if below 150V to ground.
    E. Both A and C

64. A dwelling has 9 ranges installed. Each range has a rating of 8 kW. What is the maximum demand load that should be used for calculating the service and feeder size?

A. 18.9kW
B. 24.5kW
C. 25.2 kW
D. 32.2kW

65. Determine the maximum size inverse-time breaker to be installed as motor short-circuit and ground-fault protection for a 25HP, 460V, 3-phase, squirrel-cage motor.

A. 70A
B. 85A
C. 90A
D. 110A

66. Class 1 Power-Limited Circuits shall be supplied from a source that has a rated output of not more than _____ volts and 1000 volt-amperes.

A. 30
B. 40
C. 50
D. 75

67. The service disconnecting means for each service shall consist of a combination of not more than _____ switches or sets of circuit breakers.

A. 1
B. 2
C. 6
D. 12

68. Busway runs that have sections located both inside and outside of buildings shall have a(n) _____ at the building wall to prevent interchange of air between indoor and outdoor sections.

A. 4 hour fire barrier
B. bushing
C. bonding bushing
D. vapor seal

69. Electrified truck parking space equipment provided from either overhead gantry or cable management systems shall _____ in electrified truck parking space supply equipment.

A. utilize a temporarily attached power supply cable utilize a twist
B. utilize a permanently attached power supply cable
C. lock power supply cable
D. utilize a moisture-resistant power supply cable

70. Equipment intended to interrupt current at other than fault levels shall have an interrupting rating at nominal circuit voltage _____ the current that must be interrupted.

    A. at least greater than
    B. at most, less than
    C. at least equal to
    D. matching

71. Infrared industrial process heating equipment lampholders shall be permitted to be operated in series on circuits of _____, provided the voltage rating of the lampholders is not less than the circuit voltage.

    A. over 150V to ground
    B. over 50V to ground
    C. over 120V to ground
    D. over 300V to ground

72. Legally required standby system wiring shall be permitted to occupy _____ raceways, cables, boxes, and cabinets with other general wiring.

    A. separate
    B. only two
    C. nonmetallic
    D. the same

73. In generator sets driven by a prime mover, a time-delay feature permitting a minimum _____ setting shall be provided to avoid retransfer in case of short-time reestablishment of the normal source.

    A. 15-minute
    B. 20-minute
    C. 30-minute
    D. 60-minute

74. There is a set of 3 overhead 7200V conductors supported on a solidly grounded messenger wire that runs over the pool, and over the diving platform. What is the minimum clearance these conductors must be from the diving platform?

    A. 14.5 feet
    B. 17 feet
    C. 18 feet
    D. 22.5 feet

75. The short-circuit and ground-fault protection for a hermetic motor-compressor shall have a rating NOT exceeding _____ of the motor-compressor rated-load current.

    A. 125 %
    B. 150 %
    C. 175 %

D. 225 %

76. In instances of areas within the same facility classified separately, Class I, Zone 2 locations shall be permitted to _____ Class I, Division 2 locations.

    A. abut, but not overlap
    B. overlap
    C. be installed above
    D. be installed below

77. The radius of the curve of the inner edge of any bend of Type SE cable, during or after installation, shall not be less than _____ the diameter of the cable.

    A. five times
    B. six times
    C. seven times
    D. eight times

78. A 3-phase 240V service fed with 2/0 aluminum conductors shall have a minimum size main bonding jumper of what size?

    A. 2 AWG aluminum
    B. 4 AWG copper
    C. 6 AWG aluminum
    D. 6 AWG copper

79. A receptacle outlet is not required at one- and two-family dwellings for the service of _____.

    A. pool equipment,
    B. AC condensers
    C. evaporative coolers
    D. hot water heaters

80. Conductors that supply one or more resistance welders shall be protected by an overcurrent device rated or set at not more than _____ of the conductor ampacity.

    A. 80%
    B. 125%
    C. 200%
    D. 300%

81. In a building in which critical operations power systems (COPS) are present with other types of power systems described in other sections in this article, the cover plates for the receptacles or the receptacles themselves supplied from the COPS shall _____.

    A. be bonded to the building grounding electrode conductor in a manner that establishes a low-impedance ground-fault path
    B. have a distinctive color or marking so as to be readily identifiable

C. be labeled with its circuit number and panel it's supplied from
D. be labeled with its supplied voltage rating

82. Low-voltage suspended ceiling power distribution systems shall be permanently connected and shall be permitted for listed utilization equipment capable of operation at a maximum of _____.

A. 24.8V AC
B. 30V AC
C. 42.4V AC
D. 60V AC

83. Where the AHJ can satisfactorily determine that flammable liquids having a flash point below _____ , will not be handled, such location shall not be required to be classified.

A. 100°F
B. 104°F
C. 121°F
D. 212°F

84. Electrical service and feeders shall be calculated on the basis of not less than _____ per electrified truck parking space.

A. 5 kVA
B. 8 kVA
C. 11 kVA
D. 12 kVA

85. Where _____ service disconnecting means in separate enclosures are grouped at one location and supply separate loads from one service drop, one set of service-entrance conductors shall be permitted to supply each or several such service equipment enclosures.

A. one to five
B. one to six
C. two to six
D. three to six

86. Metallic structures of battery support systems shall be provided with _____ support members for the cells, or shall be constructed with a continuous insulating material.

A. metallic
B. reinforced
C. independent
D. nonconducting

87. Where insulated conductors 4 AWG or larger are pulled straight through a multioutlet assembly, the distance between raceway and cable entries enclosing the same conductor shall not be less than _____.

A. eight times the metric designator (trade size) of the largest raceway
B. six times the metric designator (trade size) of the largest raceway
C. four times the metric designator (trade size) of the largest raceway
D. two times the metric designator (trade size) of the largest raceway

88. Each patient bed location shall be supplied by at least two branch circuits, one from the _____ and one from the normal system. All branch circuits from the normal system shall originate in the same panelboard.

A. emergency override
B. critical branch
C. energy-storage system
D. isolated grounding system

89. The minimum bending radius for 1 inch nonmetallic underground conduit with conductors shall be no less than _____.

A. 6 inches
B. 12 inches
C. 14 inches
D. 18 inches

90. No conductor larger than _____ shall be installed, except by special permission, in Cellular Metal Floor Raceways

A. 1/0 AWG
B. 2/0 AWG
C. 3/0 AWG
D. 1 AWG

91. Where equipment is installed outdoors on a roof, an equipment grounding conductor of the wire type shall be installed in outdoor portions of metallic raceway systems that use _____.

A. threaded fittings
B. expansion fittings
C. non-threaded fittings
D. compression-type fittings

92. Where structural reinforcing steel is not available or encapsulated in a nonconductive compound, a copper conductor(s) shall be utilized where all of the following requirements are met, except:

A. At least one minimum 8 AWG bare solid copper conductor shall be provided
B. The required conductor shall be secured within or under the perimeter surface 120 mm to 170 mm (6 in to 8 in) below the subgrade
C. The conductors shall follow the contour of the perimeter surface
D. The required conductor shall be 450 to 600 mm (18 to 24 in) from the inside wall of the pool

93. A Class II or Class III, Division 1 or Division 2 location shall be permitted to be reclassified as a Zone 20, Zone 21, or Zone 22 location, provided that all of the space that is classified because of a single combustible dust, combustible fiber/flying, or ignitible fiber/flying source is _____ under the requirements of this article.

    A. reclassified
    B. classified
    C. identified
    D. listed

94. Where Type PVC conduit, Type RTRC conduit, or cable with a nonmetallic sheath is used, an _____ shall be included to provide for electrical continuity of the raceway system and for grounding of non–current- carrying metal parts.

    A. grounding electrode conductor main
    B. bonding jumper
    C. equipment grounding conductor
    D. none of these

95. 22AWG control circuit conductors with 75°C insulation in a 30°C ambient environment shall have a maximum ampacity of _____ for permanent amusement attractions.

    A. 2A
    B. 3A
    C. 4A
    D. 5A

96. The capacity of the sum of all sources of the stand-alone supply shall be equal to or greater than the load posed by the _____ utilization equipment(s) connected to the stand-alone system.

    A. smallest single
    B. total combined load of all
    C. largest two
    D. largest single

97. The ampacity of the supply conductors for a resistance welder that may be operated at different times at different values of primary current or duty cycle shall not be less than _____of the rated primary current for seam and automatically fed welders, and _____of the rated primary current for manually operated nonautomatic welders.

    A. 40% / 60%
    B. 50% / 70%
    C. 60% / 40%
    D. 70% / 50%

98. On switchgear and control panels exceeding _____in width, there shall be one entrance at each end of the equipment.

A. 4 feet
B. 4 ½ feet
C. 5 feet
D. 6 feet

99. Type MV cable terminated in equipment shall be secured and supported at intervals not exceeding _____from terminations or a maximum of _____between supports.

A. 4 ft, 5 ft
B. 5 ft, 5 ft
C. 5 ft, 6 ft
D. 6 ft, 4 ft

100. In agricultural buildings the bonding conductor used for equipotential planes shall be solid copper, insulated, covered or bare, and not smaller than _____.

A. 8 AWG
B. 6 AWG
C. 4 AWG
D. 2 AWG