



Eastern Idaho Electrical JATC

2023 NEC Significant Changes Correspondence (Part 1) – 8 hrs of Code Update

The following is a general description of our 2023 NEC Significant Changes Correspondence Course:

Course Outline:

This class is to inform electrical workers of the most significant revisions and new requirements in the 2023 National Electrical Code (NEC). The coverage of changes provides attendees with insight and detailed information about the reasons for the change and how these changes impact electrical installations, industry and one's daily work and business operations. (Part 1) will cover Chapters 1 through 4 of the 2023 NEC. This packet will include 189 multiple choice questions that students will answer using (2023 National Electrical Code) and (Significant Changes to the NEC 2023).

Material/Visual Aids:

Will be using the text, "Significant Changes to the NEC 2023", published by the Electrical Training Alliance and the 2023 "National Electrical Code", published by NFPA.

Attached:

Correspondence Cover and Test
Material/Visual Aids
Completion Certificate

If you have any questions, or if you require more information, please feel free to contact me at (208)232-4300 or (208)403-6628

Sincerely,

James Smith
Training Director

8450 South 5th Avenue, Pocatello, ID 83204

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Certificate of Completion

Awarded to:

John Doe

Idaho License:

Montana:

Oregon:

Wyoming:

Other:

Course Information:

Course Name 2023 Significant Changes Correspondence, Part I

Course # WY-23-XXXX

Course Type Code Related

Location Pocatello JATC Training Center

Completed On 04/01/2023

Instructor Name Lochridge, Christopher

Hours Completed 8

Sponsored By:



James Smith

Training Director: James Smith

2023 SIGNIFICANT CHANGES, PART I CORRESPONDENCE COURSE

Please complete ALL questions and return them along with the 2023 Significant Changes book to the JATC.

The book is a loaner and there will be a \$55.00 charge for the book if it is not returned within 90 days or it has been damaged.

James Smith, Training Director (208) 232-4300

Mailing Address: Eastern Idaho Electrical JATC
8450 South 5th Avenue
Pocatello, ID 83205

This course is approved for eight hours of Code Related Continuing Education Credits for license renewal for Idaho, Montana, Oregon, *Utah, and **Wyoming.

*The State of Utah charges \$1.00 per credit hour for CE submission. Please include payment of \$8.00 for credit submission.

**Wyoming CE submission must be done by the Journeyman. Please include your email address in order to receive your training certificates.

Journeyman Name: _____

Email Address: _____

Idaho Journeyman License: _____

Reciprocal States License(s): _____

Director Signature

Date

2023 NEC Chapter 1**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. The scope of 90.1 covers the expression of _____, permissive, and nonmandatory text.
a. vague c. explicit
b. mandatory d. concise
- _____ 2. Article _____ covers practical safe guarding, adequacy, installations covered, installations not covered, relation to other international standards, and special permissions.
a. 90.4 c. 90.2
b. 90.1 d. 100
- _____ 3. The AHJ has the responsibility for making _____ of the rules, for deciding on the approval of equipment and materials, and for granting the special permission contemplated in a number of rules.
a. decisions c. permission
b. determinations d. interpretation
- _____ 4. The AHJ may waive specific requirements or permit _____ methods where it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.
a. alternative c. new
b. different d. proven
- _____ 5. 90.5 references other standards, references in the form of informational notes or annexes which are considered _____.
a. information c. references
b. explanatory material d. enforceable
- _____ 6. The _____ of Article 100 is not intended to include commonly defined general terms or commonly defined technical terms from related codes and standards.
a. section c. guide lines
b. intent d. scope
- _____ 7. Capable of being removed or exposed without damaging the building structure or finish or not permanently closed or blocked by the structure, other electrical equipment defines _____ (as applied to wiring methods).
a. readily accessible c. accessible
b. reachable d. obtainable
- _____ 8. A device that, by insertion into a weight-supporting ceiling receptacles, establishes a connection between the conductors of the attached utilization equipment and branch-circuit conductors connected to the receptacles is a definition of _____.
a. weight-supporting attachment fitting c. attachment fitting
b. ceiling fan d. paddle fan
- _____ 9. Motor branch circuits include circuit conductors, equipment between the motor branch-circuit short-circuit and _____ protective device and an individual motor.
a. overcurrent c. motor
b. ground-fault d. branch-circuit

- _____ 20. DC Ground-fault Detector-Interrupter is a device that provides protection for _____ DC circuits by detecting a ground fault and could interrupt the fault path in the DC circuit.
- a. micro-grid system
 - b. solar system
 - c. PV system
 - d. wind turbine system
- _____ 21. _____ Industrial Installations are the portions of a facility which follow conditions, such as conditions of maintenance and engineering supervision ensure that only qualified persons monitor and service the system.
- a. Supervised
 - b. Maintained
 - c. Well supervised
 - d. Managed
- _____ 22. A mutlimode inverter is equipment capable of operating in both interactive and _____ .
- a. by itself
 - b. in dependently
 - c. isolated
 - d. island mode
- _____ 23. A wet location is _____.
- a. underground
 - b. subject to saturation
 - c. exposed to weather
 - d. all the above
- _____ 24. Hazardous (Classified) Locations are where _____ or _____ hazards might exists due to flammable gases, flammable liquid-produced vapors, combustible liquid-produced vapors, combustible dusts, combustible fiber / flying, or ignitable fibers /flying.
- a. fire, flame
 - b. fire, explosion
 - c. flame, explosion
 - d. combustible, explosion
- _____ 25. Health Care Microgrids are a group of _____ loads and distributed energy resources within clearly defined boundaries that act as a single controllable entity with respect to the utility.
- a. independent
 - b. multimode
 - c. interconnected
 - d. connected
- _____ 26. An assembly of buses and connections, overcurrent devices, and control apparatus with or without switches or other equipment, installed in a cabinet, cutout box or enclosure suitable for a panelboard application is a definition of a _____.
- a. panelboard
 - b. enclosed panelboard
 - c. fuse box
 - d. OCPD panel
- _____ 27. A weight-supporting ceiling receptacle (WSCR) is a contact device installed at an outlet box for the connection and support of luminaries or ceiling-supported (paddle) fan using a _____.
- a. WSAF
 - b. WSAP
 - c. WSRV
 - d. WSCI
- _____ 28. Servicing is the process of following a manufactures set of instructions or applicable industry standards to analyze, adjust, or perform prescribed actions upon equipment with the intention to preserve or _____ the operational performance of the equipment.
- a. reinstate
 - b. repair
 - c. refurbish
 - d. restore

- _____ 39. Recondition equipment shall be marked with:
- a. name
 - b. trademark
 - c. date
 - d. all the above
- _____ 40. In general the disconnecting means, in other than one-and two-family dwellings, the marking shall include the identification and _____ of the circuit source that supplies the disconnecting means unless located and arranged so the identification and location of the circuit source is evident.
- a. panel
 - b. location
 - c. breaker
 - d. area
- _____ 41. In systems 1000 volts, nominal, or less, open equipment doors shall not _____ access or egress from working space about electrical equipment.
- a. cover
 - b. block
 - c. impede
 - d. restrict
- _____ 42. In systems 1000 volts, nominal, or less, have limited access a horizontal ceiling structure member or access panel shall be permitted in this space provided the location does not result in a side reach of more than _____ to work within the enclosure.
- a. 6"
 - b. 12"
 - c. 18"
 - d. 24"
- _____ 43. The grade, floor, or platform in required working space shall be kept clear, and the floor, grade, or platform in the working space shall be as level and flat as practical for the _____ required depth and width of the working space.
- a. length
 - b. distance
 - c. entire
 - d. space
- _____ 44. In installations of 1000 volts, nominal, or less all service equipment, switch boards, switch gear, panel boards and motor control centers shall be located in _____ and protected from damage.
- a. rooms
 - b. areas
 - c. electrical rooms
 - d. dedicated spaces
- _____ 45. Table 110.28 contains an informational note _____, which states that some type 4X enclosures may be marked indoor only.
- a. 4
 - b. 5
 - c. 3
 - d. 7
- _____ 46. Where specified in the Code that on equipment shall be "in sight from" "within sight from" or "within sight of" another equipment the specified equipment shall be visible and not more than _____ distance from each other.
- a. 75'
 - b. 50'
 - c. 25'
 - d. 10'
- _____ 47. Vault door for electrical installations shall be equipped with locks, and doors shall be kept locked and the personnel doors shall open at least _____ in the direction of egress.
- a. 180 degrees
 - b. 120 degrees
 - c. 90 degrees
 - d. 60 degrees

9. ANS: B
Article 100
SC pg.11

PTS: 1

10. ANS: D
Article 100
SC pg.12

PTS: 1

11. ANS: C
Article 100
SC pg.13

PTS: 1

12. ANS: B
Article 100
SC pg.14

PTS: 1

13. ANS: A
Article 100
SC pg.15

PTS: 1

14. ANS: D
Article 100
SC pg.16

PTS: 1

15. ANS: C
Article 100
SC pg.17

PTS: 1

16. ANS: A
Article 100
SC pg.18

PTS: 1

17. ANS: B
Article 100
SC pg.19

PTS: 1

27. ANS: A
Article 100
SC pg.29

PTS: 1

28. ANS: D
Article 100
SC pg.30

PTS: 1

29. ANS: C
Article 100
SC pg.31

PTS: 1

30. ANS: B
Article 100
SC pg.32

PTS: 1

31. ANS: A
110.3(A)(8)
SC pg.33

PTS: 1

32. ANS: D
110.3(B)
SC pg.34

PTS: 1

33. ANS: A
110.8
SC pg.35

PTS: 1

34. ANS: B
110.12
SC pg.36

PTS: 1

35. ANS: D
110.14(A)
SC pg.37

PTS: 1

45. ANS: A
110.28 Info Note 4
SC pg.47

PTS: 1

46. ANS: B
110.29
SC pg.48

PTS: 1

47. ANS: C
110.31(A)(3)
SC pg.49

PTS: 1

2023 NEC Chapter 2**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. In general, the grounded conductor, if insulated, shall have insulation that is suitably rated other than color, for any ungrounded conductors of the same circuit for systems of _____ volts or less.
- | | |
|--------|---------|
| a. 600 | c. 1000 |
| b. 800 | d. 50 |
- _____ 2. The limitation of branch-circuit voltage exceeding 277 volts, nominal to ground and not exceeding 1000 volts AC or _____ volts DC, nominal between conductors shall be permitted to supply auxiliary equipment of electric-discharge lamps, cord-and-plug connected utilization equipment, or luminaires powered from direct-current systems.
- | | |
|---------|---------|
| a. 1000 | c. 1200 |
| b. 1500 | d. 2000 |
- _____ 3. Ground-Fault Circuit Interrupters for the protection of personnel are required to be a _____ Class A GFCI and shall provide protection in accordance with 210.8(A) thru (F).
- | | |
|-----------------|-----------|
| a. manufactured | c. rated |
| b. made | d. listed |
- _____ 4. Receptacles that meet the voltage requirements listed in 210.8(A) are required to have GFCI protection within an area with sinks and _____ provisions for food preparation, beverage preparation or cooking.
- | | |
|--------------|-------------|
| a. permanent | c. cleaning |
| b. temporary | d. possible |
- _____ 5. The exception to GFCI protection in an indoor damp location shall apply to a receptacle supplying a permanently installed premises _____ shall be permitted to omit GFCI protections.
- | | |
|--------------------------|--------------------|
| a. camera system | c. security system |
| b. food preparation area | d. bath tub |
- _____ 6. GFCI in areas other than dwelling units is required where there are aquariums, bait wells, and similar open aquatic vessels or containers, such as tanks or bowls, where receptacles are installed within _____ from the top inside edge or rim or from the conductive support framing of the vessel or container.
- | | |
|--------|---------|
| a. 3ft | c. 10ft |
| b. 6ft | d. 2ft |
- _____ 7. GFCI protection shall be provided for branch circuit or outlet supplying specific appliances rated 150 volts or less to ground and 60 amperes or less, single-or-3 phase to?
- | | |
|-----------------------|----------------------------|
| a. dishwashers | c. tire inflation machines |
| b. wall-mounted ovens | d. all the above |
- _____ 8. GFCI protection shall be provided for dwellings, all outdoor outlets, other than those covered in 210.8(A), and supplied by single-phase branch circuits rated _____ volts or less to ground, 50 amperes or less.
- | | |
|--------|--------|
| a. 120 | c. 150 |
| b. 80 | d. 208 |

- _____ 19. If a receptacle outlet is not provided to serve an island or peninsular counter top or work surface, _____ shall be provided at the island or peninsular for future addition of a new receptacle outlet to serve the island or peninsular countertop or work surface.
- a. a whip
 - b. box
 - c. provisions
 - d. cord
- _____ 20. Receptacle outlets located in a work surface shall use receptacle outlet assemblies _____ for use in work surfaces or listed for use in countertops.
- a. listed
 - b. labeled
 - c. manufactured
 - d. made
- _____ 21. Required lighting switches or wall-mounted control devices _____ rely exclusively on a battery unless a means is provided for automatically energizing the lighting outlets upon battery failure.
- a. shall
 - b. may
 - c. shall not
 - d. will
- _____ 22. Feeders shall have _____ be placed such that no energized, uninsulated, ungrounded busbar or terminal is exposed to inadvertent contact by persons or maintenance equipment while servicing load terminations in panelboards, switchboards, switchgear, or motor control centers.
- a. covers
 - b. plastic covers
 - c. barriers
 - d. panels
- _____ 23. Surge-protection device in feeder which supplies _____ shall be installed.
- a. dwelling units
 - b. dormitory units
 - c. guest suites of hotels
 - d. all the above
- _____ 24. The surge-protection device for a feeder shall be installed in or adjacent to distribution equipment, connected to the _____ of the feeder.
- a. line side
 - b. load side
 - c. incoming side
 - d. feed side
- _____ 25. When calculating the load for branch-circuit, feeders, and services for marines, boat yards, floating buildings, and commercial and noncommercial docking facilities, Part _____ of Article 220 is used?
- a. V11
 - b. V1
 - c. 111
 - d. 1V
- _____ 26. When calculating the load for branch-circuits, feeders, and services in dwelling units, the calculated floor area _____ include open porches or unfinished areas not adoptable for future use as a habitable room or occupied space.
- a. shall
 - b. can be
 - c. shall not
 - d. will be
- _____ 27. The maximum load for inductive and LED lighting loads shall be calculated based on the total _____ of such units and not on the total watts of lamps.
- a. voltage rating
 - b. KV_a rating
 - c. number
 - d. ampere rating

- _____ 37. If a circuit feeding a boat hoist and share power for the same _____ is shared, only the load with the larger kilowatt demand shall be required to be counted in the load calculation.
- a. dock
 - b. boat slip
 - c. marina
 - d. floating building
- _____ 38. For open individual conductors on outside branch circuits and feeder the conductors shall not be smaller than _____ copper or 8AWG aluminum for over head spans up to 50ft in length.
- a. 8AWG
 - b. 6AWG
 - c. 12AWG
 - d. 10AWG
- _____ 39. Outside branch circuits and feeders for building or other structures shall be _____ for disconnecting all ungrounded conductors that supply or pass through the building or structure.
- a. equiped
 - b. made
 - c. provided
 - d. installed
- _____ 40. One-and two-family dwelling units shall have emergency disconnecting means installed in a _____ outdoor location on or within sight of the dwelling unit.
- a. accessible
 - b. readily accessible
 - c. identified
 - d. marked
- _____ 41. The emergency disconnect means which shall be marked EMERGENCY DISCONNECT and located on the _____ of the disconnect enclosure with red background and white text.
- a. side
 - b. wall
 - c. outside front
 - d. door
- _____ 42. Surge-protective devices shall be installed in _____.
- a. guest rooms
 - b. dormintory unit
 - c. dwelling units
 - d. all the above
- _____ 43. Service conductors, _____ be installed in the same race way, cable, hand hole enclosure, or underground box as circuit conductors, which are other than service conductors.
- a. shall not
 - b. shall
 - c. are permitted
 - d. are not permitted
- _____ 44. Service conductors above roofs shall have a clearance of not less than _____.
- a. 9ft
 - b. 8ft 6in
 - c. 8ft 4in
 - d. 10ft
- _____ 45. The minimum size and ampacity of service entrance conductors supplying any combination of continuous and noncontinuous loads shall have an mapcity not less than the sum of the noncontinuous loads plus _____ of continuous loads.
- a. 100
 - b. 150
 - c. 200
 - d. 125
- _____ 46. Service-entrance conductors, 1000 volts, nominal, or less, shall be installed in accordance with the applicable requirements of this Code and shall be limited to:
- a. wire ways
 - b. flexible bus systems
 - c. Type TC-ER where identified
 - d. all the above for use as service entrance conductors

- _____ 57. If one or more feeder overcurrent protective devices are required to be selectively coordinated with a service overcurrent protective device then _____ feeder overcurrent protective devices supplied shall be selectively coordinated with the service overcurrent protective device.
- a. one of the
 - b. all
 - c. two of the
 - d. none of the
- _____ 58. When accessing overcurrent protective devices located within listed industrial control panels, within enclosures designed for hazardous (classified) locations or enclosures to protect against environmental conditions, the use of _____ is allowed.
- a. key
 - b. lock
 - c. tool
 - d. hasp
- _____ 59. The replacement trip unit for use with the circuit breaker type in which it is installed shall be _____.
- a. identified
 - b. marked
 - c. listed
 - d. labeled
- _____ 60. Surge protection devices shall provide _____ that it is functioning properly.
- a. a means
 - b. indication
 - c. device
 - d. a light
- _____ 61. The duty cycle rating of surge arrestors, over 1000 volts, shall not be less than _____ of the maximum continuous operating voltage available at the point of application.
- a. 125%
 - b. 100%
 - c. nominal voltage
 - d. phase-to-phase voltage
- _____ 62. New Article _____ covers overcurrent protection for systems rated over 1000 volts AC, 1500 volts DC.
- a. 240
 - b. 242
 - c. 250
 - d. 245
- _____ 63. Overcurrent protective equipment rated over 1000 volts AC, 1500 volts DC, which is permitted to be reconditioned are: _____
- a. medium-and-high voltage circuit breakers
 - b. (a) only
 - c. electromechanical protective relays and current transformers
 - d. (a) and (c)
- _____ 64. Currents not classified as objectionable currents resulting from _____ conditions such as ground faults, and from currents resulting from required grounding and bonding connections shall not be classified as objectionable current.
- a. normal
 - b. abnormal
 - c. objectionable
 - d. isolated
- _____ 65. Alternating-current systems shall be grounded in accordance with 250.20(A)(B)(C) or (D) unless _____ elsewhere in this code.
- a. prohibited
 - b. provided for
 - c. specified
 - d. denied
- _____ 66. The service-supplied alternating-current systems which is connected in parallel in two or more raceways or cables, the grounded shall also be installed in each raceway or cable and shall be connected _____.
- a. in series
 - b. permanently
 - c. together
 - d. in parallel

**2023 NEC Chapter 2
Answer Section**

MULTIPLE CHOICE

1. ANS: C
200.2(A)(1)
SC pg. 52

PTS: 1

2. ANS: B
210.6(D)
SC pg. 53

PTS: 1

3. ANS: D
210.8
SC pg.54

PTS: 1

4. ANS: A
210.8(A)(7)
SC pg.54

PTS: 1

5. ANS: C
210.8(A)(12) Ex No. 2
SC pg.55

PTS: 1

6. ANS: B
210.8(B)(13)
SC pg. 56

PTS: 1

7. ANS: D
210.8(D) (4,7,9)
SC pg.57

PTS: 1

8. ANS: C
210.8(F)
SC pg.58

PTS: 1

18. ANS: B
210.52(A)(2)(1)
SC pg.64

PTS: 1

19. ANS: C
210.52(C)(2)
SC pg.65

PTS: 1

20. ANS: A
210.52(C)(3)(3)
SC pg.65

PTS: 1

21. ANS: C
210.70
SC pg.66

PTS: 1

22. ANS: C
215.15
SC pg.66

PTS: 1

23. ANS: D
215.18(A)(1,2,3)
SC pg.68

PTS: 1

24. ANS: B
215.18(B)

PTS: 1

25. ANS: A
220.1
SC pg.69

PTS: 1

26. ANS: C
220.5(C)
SCC pg.70

PTS: 1

27. ANS: D
220.11(B)

PTS: 1

37. ANS: B
Table 220.120 Note 3
SC pg.78

PTS: 1

38. ANS: D
225.6(A)

PTS: 1

39. ANS: C
225.31

PTS: 1

40. ANS: B
225.41(A)(1)
SC pg.79

PTS: 1

41. ANS: C
225.41(C)(1)
SC pg.79

PTS: 1

42. ANS: D
225.42(A)(1,2,3)
SC pg.80

PTS: 1

43. ANS: A
230.7
SC pg.81

PTS: 1

44. ANS: B
230.24(A)
SC pg.82

PTS: 1

45. ANS: D
230.42(A)(1)

PTS: 1

46. ANS: D
230.43(8,20,21)
SC pg.83

PTS: 1

56. ANS: C
240.7
SC pg.92

PTS: 1

57. ANS: B
240.11
SC pg.93

PTS: 1

58. ANS: C
240.24(A)Ex
SC pg.94

PTS: 1

59. ANS: C
240.89
SC pg.95

PTS: 1

60. ANS: B
242.9
SC pg.96

PTS: 1

61. ANS: A
242.42
SC pg.97

PTS: 1

62. ANS: D
245
SC pg.98

PTS: 1

63. ANS: D
245.2
SC pg.99

PTS: 1

64. ANS: B
250.6(C)
SC pg.100

PTS: 1

2023 NEC Chapter 3**Multiple Choice**

Identify the choice that best completes the statement or answers the question.

- _____ 1. The scope of Article 300 covers the requirements of this article are not intended to apply to the conductors that form an _____ of equipment, such as motors, controllers, motor control centers, or factory-assembled control equipment or listed utilization equipment.
- physical part
 - specific part
 - substantial part
 - integral part
- _____ 2. Where not specifically limited elsewhere in Chapter 3 wiring methods _____ used for 1000 volts AC, 1500 volts DC, nominal or less.
- shall not be
 - shall be
 - may be
 - can be
- _____ 3. Single conductors specified in Table 310.4(1) shall only be _____ where installed as part of recognized wiring methods specified in Chapter 3.
- permitted
 - used
 - allowed
 - limited
- _____ 4. Where subject to _____ conductors, raceways, and cables shall be protected.
- harm
 - traffic
 - physical damage
 - damage
- _____ 5. A cable, raceway, or box installed in exposed or concealed locations under metal-corrugated sheet roof decking, shall be installed and supported so there is not less than _____ measured from the lowest surface of the roof decking to the top of the cable, raceway or box.
- 2"
 - 3"
 - 1"
 - 1.5"
- _____ 6. References for expansion, expansion-deflection, and _____ fitting can be found in Informational Notes 1&2 of Article 300.7(B).
- deflection
 - offset
 - angled
 - expandable
- _____ 7. A box or conduit body shall be installed at each outlet point, switch point, conductor splice point, conductor junction point, conductor termination point, wiring method _____ point or conductor pull point unless other wise permitted in 300.15(A)through(L).
- turning
 - transition
 - termination
 - pull
- _____ 8. Where egress lighting is required on outside exterior door ways from exit enclosure (stair tower), _____ shall be permitted to be supplied from the inside of the exit enclosure.
- power
 - lighting
 - luminaries
 - control power
- _____ 9. Remote-control and _____ circuits shall be classified as either power-limited or non-power-limited.
- signal
 - low-voltage
 - control
 - information

- _____ 19. Article 315 Medium Voltage Conductors, cables, cable joints, and cable terminations include voltages from _____ volts to _____ volts AC, nominal and 2001 volts to 2500 volts DC nominal.
- a. 2001, 35000
 - b. 2001, 2500
 - c. 2001, 4160
 - d. 2001, 3500
- _____ 20. Bends of IMC shall be made so that the conduit will not be damaged and the _____ of the conduit will not be effectively reduced.
- a. outside diameter
 - b. internal diameter
 - c. outer jacket
 - d. diameter
- _____ 21. The total degrees of _____ in a conduit run shall not exceed 360 degrees between pull points.
- a. angles
 - b. curves
 - c. bows
 - d. bends
- _____ 22. The exception for securing IMC for concealed work in finished buildings or pre-finished wall panels where such securing is impracticable, unbroken length (_____) of IMC shall be permitted to be fished.
- a. fittings
 - b. connectors
 - c. without coupling
 - d. condulets
- _____ 23. PVC- coated RMC shall be threaded in accordance with manufacture's _____ to prevent damage to the exterior coatings.
- a. instructions
 - b. guidelines
 - c. information
 - d. directions
- _____ 24. Where rigid PVC conduit is subject to damage, schedule 80 PVC conduit, schedule 80 PVC _____ and listed fittings for PVC conduit shall be used.
- a. 20
 - b. 80
 - c. 40
 - d. 60
- _____ 25. EMT is permitted for use in concrete, indirect contact with the earth in direct burial applications with fitting _____ for direct burial.
- a. made
 - b. labeled
 - c. manufactured
 - d. identified
- _____ 26. ENT is permitted in a building exceeding three floors above grade _____ within combustible or noncombustible walls, floors, and ceiling where the walls, floors and ceilings provide a thermal barrier of material that has at least 15 minute finishing rating as identified in listings of fire-rated assemblies.
- a. concealed
 - b. hidden
 - c. behind and
 - d. and
- _____ 27. The uses permitted for Insulated Bus Pipe (IBP) / Tubular Covered Conductors (TCC) systems is covered in _____.
- a. 368.10
 - b. 370.10
 - c. 369.10
 - d. 376.10
- _____ 28. Cable bus shall be permitted to extend _____ through partitions and walls or vertically through platforms and floors in wet and dry locations where the installation, complete with the installed cables is made in accordance with 300.21.
- a. vertically
 - b. transversely
 - c. horizontally
 - d. diagonally

**2023 NEC Chapter 3
Answer Section**

MULTIPLE CHOICE

1. ANS: D
300.1(B)
SC pg.112

PTS: 1

2. ANS: B
300.2(A)
SC pg.113

PTS: 1

3. ANS: A
300.3(A)
SC pg.113

PTS: 1

4. ANS: C
300.4
SC pg.114

PTS: 1

5. ANS: D
300.4(E)
SC pg.114

PTS: 1

6. ANS: A
300.7B)
SC pg.115

PTS: 1

7. ANS: B
300.15
SC pg.116

PTS: 1

8. ANS: C
300.25 Exception
SC pg.117

PTS: 1

18. ANS: D
314.27(E)
SC pg.126

PTS: 1

19. ANS: A
315.1
SC pg.127

PTS: 1

20. ANS: B
324.24(A)
SC pg.128

PTS: 1

21. ANS: D
342.24(B)
SC pg.128

PTS: 1

22. ANS: C
342.30 Exception
SC pg.129

PTS: 1

23. ANS: A
344.28
SC pg.130

PTS: 1

24. ANS: B
352.10(K)
SC pg.132

PTS: 1

25. ANS: D
358.10(A)(1)
SC pg.132

PTS: 1

26. ANS: A
362.10(2)
SC pg.133

PTS: 1

- _____ 22. Ceiling-suspended (paddle) fans outlet boxes or listed outlet box systems _____ for fan support in accordance with 314.27(C).
- a. marked
 - b. identified
 - c. labeled
 - d. support
- _____ 23. Fixed electrical space-heating equipment that utilizes installation of cables in walls are required to be _____ and _____ protected.
- a. GFCI, AFCI
 - b. cord, plug
 - c. GFEP, AFCI
 - d. GFCI, GFEP
- _____ 24. Article 430 Motors, Motor Circuits, and controllers directs the user to use informational note _____ after figure 430.1 for additional requirements for motors utilizing adjustable-speed drive systems.
- a. 2
 - b. 3
 - c. 1
 - d. 4
- _____ 25. For most general motor applications, values in the tables in Part XIV in Article 430 are used based on the horsepower ratings for motors as large as 500 horsepower. The new section 430.6(A)(2)(3) was added to permit the use of _____ - _____ current ratings for motors that exceed the motor sizes in Part XVI.
- a. full load
 - b. short-circuit
 - c. name-plate
 - d. available-circuit
- _____ 26. The percentage of full-load current that a Design B and Design B premium efficiency motor on an instantaneous trip breaker can be is _____.
- a. 800
 - b. 1100
 - c. 300
 - d. 150
- _____ 27. The new section 430.83(F) prohibits installing a motor controller on a circuit where the available fault current _____ the motor controller's short-circuit current rating.
- a. exceeds
 - b. equals
 - c. is less than
 - d. averages
- _____ 28. Air-conditioning and refrigeration equipment is prohibited from being installed within _____ feet horizontally and _____ feet vertically above a bathtub rim or shower threshold, including the space directly above the shower or tub.
- a. 3,8
 - b. 6,4
 - c. 8,4
 - d. 8,3
- _____ 29. If the values fro branch-circuit short-circuit and ground-fault protection in accordance with 440.22(A) or the rating modified by Ex. No.1 is not sufficient for the starting current of the motor, the rating or setting shall be permitted to increase but not exceed _____.
- a. 125
 - b. 150
 - c. 225
 - d. 250
- _____ 30. Stationary generators _____ be listed.
- a. will be
 - b. shall
 - c. may be
 - d. shall not
- _____ 31. A new marking requirements was added to Article 445 Generators that requires the generator nameplate shall be _____.
- a. marked
 - b. accessible
 - c. labeled
 - d. legible

**2023 NEC Chapter 4
Answer Section**

MULTIPLE CHOICE

1. ANS: B
Article 400 Part III
SC pg.140

PTS: 1

2. ANS: C
Article 400 Part IV
SC pg.140

PTS: 1

3. ANS: B
404.1
SC pg.141

PTS: 1

4. ANS: A
404.14
SC pg.142

PTS: 1

5. ANS: B
404.14(D)(1)(2)and(3)
SC pg.142

PTS: 1

6. ANS: D
404.16(A)
SC pg.143

PTS: 1

7. ANS: A
404.30
SC pg.144

PTS: 1

8. ANS: C
406.3(C)
SC pg.145

PTS: 1

18. ANS: C
410.42
SC pg.155

PTS: 1

19. ANS: C
410.71
SC pg.156

PTS: 1

20. ANS: B
410.191
SC pg.157

PTS: 1

21. ANS: C
422.6
SC pg.158

PTS: 1

22. ANS: B
422.18(A)(1)
SC pg.159

PTS: 1

23. ANS: A
424.48
SC pg.160

PTS: 1

24. ANS: D
430.1 Info Note No.4
SC pg.161

PTS: 1

25. ANS: C
430.6(A)(2)(3)
SC pg.162

PTS: 1

26. ANS: B
430.52(C)(1)
SC pg.163

PTS: 1

36. ANS: C
460.24(A)
SC pg.171

PTS: 1

37. ANS: B
480
SC pg.172

PTS: 1

38. ANS: A
480.1
SC pg.172

PTS: 1

39. ANS: C
480.1 info Note No.1
SC pg.172

PTS: 1

40. ANS: C
495
SC pg.173

PTS: 1