Chapter 3 Electrical Motor Controls

1. What is the purpose of the NEC and the CEC?
2. When installing a fuse, which end should be installed first? Line or neutral.
3. What parts of an electrical system are required to be grounded?
4. Which class of fire extinguisher is to be used for an electrical fire?
5. Why is it recommended to work with one hand on live electrical equipment?
6. What is a “Qualified” person with regard to electrical work?
7. What are the three most common safety label signal words?
8. What are the three most common colors for safety labels?
9. At what level is a shock likely to be painful with an inability to let go?
10. What is the purpose of the third (green) wire in a cord for a power tool?
11. If power can’t be quickly be turned off when a person is receiving a shock, what is the next step?
12. What are some common methods of “Grounding”?
13. Where is a main bonding jumper found?
14. How much current will cause a GFCI breaker to trip?
15. Will a GFCI trip when an electrician comes in contact with an ungrounded conductor and the grounded (neutral) conductor?
16. What are two causes of high-voltage transient surges?
17. What is the minimum category rating for a meter to test three-phase service equipment indoors?
18. What is the minimum category rating for a meter to test appliances and portable tools?
19. What is the minimum category rating for a meter to test outside service entrance?
20. Why is using one hand recommended when working around live electrical equipment?
21. What are the two hazards associated with working around motors?
22. What are three materials used for arc-resistant clothing?
23. What are some of the synthetic materials that must not be worn when working around live, high-voltage circuits?
24. What is an arc flash?
25. What is an arc blast?
26. Which common task is often associated with arc flash?
27. What piece of equipment is often used to protect workers from adjacent live electrical circuits when working on a de-energized circuit?
28. Which hardhat class offers the highest voltage protection?
29. What does eye protection include for PPE?
30. What is the purpose of the tinting on safety glasses and goggles?
31. Why should pitted or scratched lenses in safety glasses be replaced?
32. What two things do the severity of hearing loss depend on?
33. What is indicated by NRR 27 on ear muff hearing protection?
34. What color is the label on rubber insulating gloves for working on 16,000 V?
35. What color is the label on rubber insulating gloves for working on 6,000 V?
36. Are leather protectors rated for voltage?
37. What are the two parts to a field test for rubber insulating gloves? Visual and air tests
38. What is the proper procedure for gloves that fail a field test? Tagged as unsafe and returned to a supervisor
39. Safety shoes with steel toes protect from what two types of injuries? Compression and impact
40. What is the proper method for one person carrying lengths of conduit? Tipped down in front
41. What are two precautions when lifting? Lift with the legs and keep load close to body
42. What are the two types of rubber insulating matting? Type 1 natural rubber and Type 2 elastomer compound
43. What are three types of power that must be locked out before working on equipment? Electrical, hydraulic and pneumatic
44. Who is authorized to remove a lockout/tagout on a piece of equipment? Person who installed it or in emergency or that person is not there supervisor
45. When is a tagout used alone? Lock will not fit on disconnecting device
46. What is the purpose of a lockout/tagout hasp? Allow more than one lock to be installed
47. Where should rags containing alcohol or gasoline be stored? Covered metal container
48. What are the four classes of fires? A. Combustibles (ordinary) B. Flammable liquids C. Electrical Equipment D. Combustible metals E. Commercial cooking grease
49. What are the three components necessary for a fire? Fuel, heat, and oxygen
50. Which class fire extinguisher would be used on a fire in a conveyor motor? Class C
51. What are the three classifications of hazardous areas? Class, Division, Group
52. What is the term used to describe an area large enough and so configured that a person may enter and perform assigned work, that has limited or restricted means for entry and exit, and is not designed for continuous occupancy? Confined Space
53. What are the three types of air hazards in a confined space? Oxygen deficiency, combustible gasses, and toxic gasses
54. What class and division are given to an area where gasoline is stored in closed containers and occasionally transferred between containers? Class 1 Division 2
55. What class and division are given to an area where grain products are pulverized? Class 2 Division 1
56. What is the term used to describe a confined space that does not contain, or have the potential to contain any hazards capable of causing death or serious physical harm? Non-permit confined space
57. What document must be posted at the entrance to a confined space or made available to entrants? Entry Permit Procedures
58. According to the CEC (Table 56), what is the minimum working clearance around equipment with exposed live parts if the voltage is 69,000V? 3 m
59. What is the minimum vertical ground clearance (CEC Table 34) for open line conductors on a 50 kV system? 7.6 m