Code Questions for Three-phase Service

1. When is a load over 225A not considered continuous for calculating the demand for a consumer’s service? Can be proven it will not operate more than 3 hours in any 6 hour period (Rule 8-104)

2. What is the demand wattage for show window lighting 8 M long? 5200 (Rule 8-302)

3. What percentage of the basement area is considered “living area” when calculating the demand for a consumer’s service? 75% (Rule 8-110)

4. What percentage of the motor FLA is used to determine the conductor size for a motor with an intermittent duty and 15 minute rating? 85% (Table 27)

5. Panel boards must be protected by overcurrent devices set at not more than the rating of the panel board unless a certain percentage of the load consists of motors. What is that percentage? 90% (Rule 14-606)

6. What color is used for the phase “B” conductor in a three-phase system according to the CEC? Black (Rule 4-036)

7. A No.1/0 grounding or bonding conductor must be green or green with a yellow stripe throughout its entire length. True or false? (Rule 4-036)

8. When is a ground detection system required according to the CEC? Systems supplied by an ungrounded supply (Rule 10-106)

9. What is the demand wattage for a branch circuit supplying a 14 kW range? 8.8 kW (Rule 8-300)

10. What two requirements must be met when a ground detection system is installed on an ungrounded system? (Appendix B Rule 10-106)

11. What is the maximum number of consumer’s services (same voltage and characteristics) terminated at one supply service? (Rule 6-104)

12. Instrument transformers on switchboards do not need to have the secondary grounded if they are connected to circuits of less than 300V to ground. True or false? (Rule 10-116)

13. Where does the CEC require service entrance equipment be installed? As close as practicable to the point of entry into the building (Rule 6-206)
14. What is the maximum size service entrance where current transformers are not required? 200 A (Rule 6-404)

15. What is the minimum height above the peak or highest point of a roof for conductors run aerially? 1 m (Rule 12-310)

16. What is the distance of expansion for a length of PVC conduit 30 m long installed where temperatures range between -35°C and 38°C? 113.9 mm (Rule 12-1012 Appendix B)

17. What is the minimum size copper bonding conductor for instrument transformers? No. 12 AWG (Rule 10-820)

18. What is the minimum number of branch circuit positions for a 200A service where provision is made for a central electric heating system? 30 (Rule 8-108)

19. What is the minimum number of branch circuit positions for an apartment where the required ampacity of the feeder conductors exceeds 60 A? 12 (Rule 8-108-3-b)

20. What is the demand wattage for the first 30 automobile spaces or stalls when the branch circuit loading is restricted or controlled? 650 W (Rule 8-400)

21. What is the minimum size conductor required for a 3% voltage drop if the load is 125A/240V and the distance is 30M? No.4 AWG (Table D-3)

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