Pretest Module 7 Units 3 & 4 Single-Phase Service

1. How many windings are on the secondary side of a distribution transformer?

2. How is 120 V power connected to the secondary of a distribution transformer?

3. What are some advantages of a three-wire system?

4. What is a combination panel board?

5. Why is the neutral wire of service entrance not fused?

6. Why is the neutral wire grounded at the service entrance?

7. What are the two methods for bringing the service conductors into a residential building?

8. What are the advantages of an underground service entrance?

9. At what point in a service entrance does a customer’s responsibility begin?

10. What is an “Emily Knob”?

11. What are the minimum and maximum heights for the supply conductors to connect to a residence?

12. What is the recommended height of a meter base?

13. What is the purpose of a service mast?

14. How far below the mast weather head is the insulator rack to be mounted?

15. How many straps must be installed on a service mast?

16. What is the minimum distance that must be maintained from the roof to the bottom of a drip loop for a service entrance?

17. What are the two purposes of the messenger cable?

18. What is the maximum distance for a supply span of triplex cable?

19. How wide must marker tape be for underground cables?
20. What are the reasons for grounding and bonding? 

21. What are three methods of grounding an electrical system? 

22. What is a “Ufer” ground? 

23. What is a plate electrode? 

24. What is a rod electrode? 

25. What table in the CEC is used to find the size of conductor for a grounded service? 

26. What are the four acceptable method of connecting a grounding electrode to the ground wire? 

**Skip Task 3 & Go To 4**

1. What percentage of the main floor area of a house must be used for calculating the size of service entrance? 

2. What percentage of the basement floor area of a house must be used for calculating the size of the service entrance? 

3. How is the basic load calculated for a residence? 

4. How is the range load calculated for a residence? 

5. What are considered “other loads” for calculating the size of service in a residence? 

6. What is the demand factor for swimming pool heating loads? 

**Unit 4**

1. What type of information is found in section 2 of the CEC?
2. What are the two materials for conductors?

3. What is the range of wire sizes according to the AWG?

4. What are the three most common types of wire insulation?

5. What is the minimum size wire for branch circuits?

6. Which table is used to determine conductor size for aluminum conductors in conduit?

7. How can exposed conductors get a free air rating?

8. Which table is used to de-rate conductors in ambient temperatures above 30°C?

9. Which table is used to de-rate conductors if there are more than three in a conduit or cable?

10. What is the ampacity of 3-No.8 R90 aluminum conductors in a conduit?

11. What is the ampacity of 4-No.8 R90 aluminum conductors in a conduit?

12. What is the ampacity of 3-No.4 R90 aluminum conductors in free air?

13. What is the ampacity of 3-No.4 R90 copper conductors in a conduit?

14. What is the ampacity of 4-No.4 R90 copper conductors in a conduit?

15. What is the minimum size neutral conductor that may be black but painted or taped white on the ends?

16. What does a natural gray conductor indicate?

17. What does a green conductor indicate?

18. What is the supply service?

19. What is the maximum height of branch circuit breakers at the main service entrance?
20. What are some locations where service entrance equipment should not be installed?

21. What are the two main rules when installing branch circuits?

22. What is the demand wattage for a water heater with two 3000 W elements if they are hooked up flip-flop? (Only one can be on at a time)

23. How many amps can be connected to a 15 A fuse?

24. What are the five advantages to grounding and bonding?

25. What is the problem with a high impedance ground?

26. Which table in the CEC is used to determine the size of the system grounding conductor?

27. What size grounding conductor is required for a 100A service entrance?

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