

**CMGT 235 – Electrical and Mechanical Systems**

**Homework #21 – Service Entrance, Grounding, and Bonding**

Due: 11/4/2021

Points: 20

Name: \_\_\_\_\_

1. What are the incoming service conductors brought to a building overhead called?
2. What are the incoming service conductors brought to a building routed underground called?
3. How many disconnects are permitted by the NEC to be installed at the service entrance?
4. What amperage service does the NEC require for new single-family dwellings?
5. List the wire types are allowed for service entrance conductors:
  - 1.
  - 2.
  - 3.
  - 4.
  - 5.
6. Explain the difference between conduit and cable.
7. What NEC Table establishes the allowable ampacities of insulated conductors?
8. What is the purpose of the service head?
9. What article in the NEC covers temporary wiring?

10. What NEC table indicates the proper size for the grounding electrode conductor?
11. The installation of a 100 A service entrance using 1/0 AWG copper service wires would require what size copper grounding electrode conductor?
12. What is a transformer that increases the primary voltage called?
13. What is a transformer that decreases the primary voltage called?
14. What is the most common residential service voltage?
15. What is connecting the house's wiring to the earth called?
16. What are the three permitted locations that connection to the earth for the service entrance can be at?
17. What type of metal can be used for grounding to a water pipe?
18. What is the main purpose of bonding?
19. List two overcurrent protection devices:
  - 1.
  - 2.
20. What is the symbol used on an electrical plan for a panelboard?