Chapter 18 Test: Switches

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Class: ELT 211 Date:

Carefully read each question, and circle the letter next to the correct answer.

1. Which is not one of the four general classes of switches?
   a. Air switches
   b. Oil switches
   c. Disconnect switches
   d. Sulfur hexafluoride switches

2. What job does the circuit breaker perform?
   a. It completes currents
   b. It maintains currents
   c. It interrupts currents
   d. All of the above

3. What is a group switch?
   a. A single phase switch
   b. A switch that operates all three phases at once
   c. A group of multiple switches opening multiple circuits at the same time
   d. None of the above

4. What are the job of arcing horns?
   a. They help break an arc
   b. They form the electrical contact when the switch is closed
   c. They help insure the switch closes properly
   d. They act as lightning rods on switches

5. A disconnect switch is a good selection for breaking load.
    a. True
    b. False

6. In order to work on previously energized equipment, what must take place before it can be considered deenergized?
    a. A visible open must be established between the equipment and the energized line.
    b. The equipment must be tested for make sure that it is deenergized
    c. The equipment must have protective grounds installed
    d. All of the above

7. How many phases can an oil switch open at once?
    a. 1
    b. 2
    c. 3
    d. Either a or c

8. How does an oil circuit recloser react to faults on distribution lines?
    a. When a fault is detected the recloser locks out, deenergizing the line
    b. When a fault occurs on the line the recloser waits for the circuit breaker to open, and then locks out the affected line.
    c. When a fault is detected the recloser opens, then recloses the line multiple times before it locks out.
    d. None of the above

9. Which of the following is not a temporary fault?
    a. Wires swinging together
    b. Tree branches in lines
    c. A fallen phase
    d. Animal contact with energized lines

10. What is the objective of recloser and fuse coordination?
    a. To eliminate outages due to temporary faults
    b. To make sure that they have a pleasing appearance
    c. To make sure that permanent faults effect the smallest amount of consumers possible
    d. Both a and c

11. How does a sectionalizer operate
    a. The same as a circuit breaker
    b. It takes the effected line out of service during a period when the recolser has opened the circuit.
    c. It is used to break load
    d. It is used as a power transformer

12. Vacuum reclosers and oil circuit reclosers perform the same job.
    a. True
    b. False

13. What the acronym SF_6 stand for?
    a. Sodium hexafenol
    b. Sodium hexaflorene
    c. Sulfur dioxide
    d. Sulfur hexafluoride

14. What is SF_6 gas used for?
    a. Weapons of mass destruction
    b. An insulating and interrupting medium
    c. To maintain the insulating qualities of mineral oil
    d. To reduce the effects of corona

15. What does the term load break mean?
    a. It means a device is capable of opening normal operating current
    b. It means a device is incapable of breaking normal operating current
    c. It means that the device will be destroyed if opened under normal conditions
    d. It means the device will be destroyed if subjected to fault current

16. Which is NOT a condition that must be met to maintain coordination between reclosers and fuses?
    a. Fuses and reclosers should be of the same color and class
    b. Fuses should be protected by a recloser fast trip to clear transient faults
    c. Reclosers and/or fuses in series should be sized such that the source device operates before the load device over the entire range of fault currents
    d. Fuses should be sized as large as fault current and source side protective devices will permit in order to avoid blowing fuses on overload

17. Where are sectionalizers usually installed?
    a. With important equipment
    b. In substations
    c. In control houses
    d. On taps or branches off of main lines

18. What is an extinguishing medium used in circuit breakers?
    a. Air
    b. Oil
    c. SF_6 gas
    d. All of the above

19. What can happen if load is broken with a device not made to break load?
    a. An arc can form destroying equipment
    b. An arc can form, and jump to other phases or ground causing a short
    c. It is completely safe to break load with a device not designed for that function.
    d. Both a and b

20. Disconnect switches are NOT used to complete a connection to or isolate the following:
    a. An energized transmission line and an energized distribution line
    b. Transmission or distribution lines from substation equipment
    c. Substation equipment
    d. A distribution feeder circuit and branch circuit