Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Utility Services Safety Quiz**

1. \_\_\_\_\_ Natural gas is a pure form of which of the following gases?
   1. Propane
   2. Methane
   3. Map gas
   4. Acetylene
2. \_\_\_\_\_ What is the main purpose of mercaptan when added to natural gas?
3. To aid in leak detection
4. To make natural gas lighter than air
5. To provide a pleasant odor to the natural gas
6. To make natural gas heavier than air
7. \_\_\_\_\_ The explosive limits of natural gas are concentrations between
   1. 6 and 18% in air
   2. 7 and 21% in air
   3. 5 and 15% in air
   4. 8 and 24% in air
8. \_\_\_\_\_ Which of the following statements about natural gas is false?
   1. Natural gas is classified as an asphyxiate because it can displace air in a confined space leading to suffocation
   2. Natural gas is lighter than air and has a tendency to rise and disperse when not confined
   3. Natural gas may be compressed, stored, and shipped in pressure cylinders identified and marked as Compressed Natural Gas (CNG) cylinders
   4. Natural gas is flammable and toxic
9. \_\_\_\_\_ There are two main gases classified as LPG. They are
   1. Methane and ethane
   2. Acetylene and map
   3. Propane and butane
   4. Butane and methane
10. \_\_\_\_\_ LPG’s explosive range is
    1. 1.5 and 10% in air
    2. 2.5 and 12% in air
    3. 3.5 and 13% in air
    4. 4.5 and 14% in air
11. Which of the following statements about emergency response in LPG emergencies is true?
    1. The supply of gas can be stopped by shutting a valve at the tank
    2. LPG leaks produce a visible cloud of vapor that hugs the ground
    3. LPG tanks and cylinders are subject to BLEVE
    4. All of the above
12. \_\_\_\_\_ When gas supply valves are in the closed position, they are
    1. Parallel to the supply pipe (inline)
    2. At a 90 degree angle to the supply pipe (perpendicular)
    3. At a 45 degree angle to the supply pipe
    4. At a 60 degree angle to the supply pipe
13. \_\_\_\_\_ Emergency personnel should approach leaks and gas fires from
    1. The leeward or downwind side
    2. The uphill side
    3. The windward or upwind side
    4. The downhill side
14. \_\_\_\_ Commercial and industrial electrical equipment commonly have
    1. Capacities of 600 volts or greater
    2. Capacities of 800 volts or greater
    3. 220 volts or greater
    4. 110 volts or greater
15. \_\_\_\_ In an emergency involving electricity
    1. Always consider power lines charged until the local utility company verifies that they are not
    2. When it is necessary to shut off power to a building, the main switch can be used, and it should be locked and tagged out
    3. Transmission lines often break and fall, creating fires in dry vegetation
    4. All of the above
16. \_\_\_\_ In electrical fires dealing with transmission lines
    1. Many local Standard Operating Procedures (SOPs) require notification of the local electrical utility when this type of incident occurs
    2. That have fallen, cordon off or isolate an area equal to two spans between telephone (electrical) poles
    3. Only fire service personnel should cut the lines
    4. None of the above
17. Transformer fires
    1. Are fairly common
    2. Should be extinguished with carbon dioxide or dry chemical extinguishers
    3. Can expose firefighters to a carcinogenic liquid that contain polychlorinated biphenyls (PCBs)
    4. Should be extinguished with fog steam if there is danger that the transformer may fall prior to the arrival of utility personnel, depending on local policy
    5. All of the above
18. \_\_\_\_ Members of the public should be kept a minimum of how many feet away from fires occurring in underground electrical transmission vaults?
    1. 200 feet
    2. 300 feet
    3. 400 feet
    4. 500 feet
19. \_\_\_\_ Which of the following statements is true regarding emergency responses in high voltage electrical installations?
    1. PCB laced coolants and chemicals used in insulating the equipment create very toxic smoke, creating a danger for firefighters
    2. Full PPE including SCBA must be worn by firefighters
    3. A tag line should be monitored from outside, and a Rapid Intervention Team (RIT) or Rapid Intervention Crew (RIC) should be in place
    4. All searches should be done using clenched fists or the back of the hand to prevent involuntarily grabbing energized equipment through reflex reaction
    5. All of the above