ES16 – Pre-Instructional Survey

Name: ___________________________________   Date: ____________________________

1. What is the purpose of a Burner Management System (BMS)?
   a. Prevent Boiler Explosions
   b. Prevent Boiler Implosions
   c. Prevent damage to equipment and injury
   d. All of the above

2. How many NFPA standards are there for a boiler BMS?
   a. one
   b. four
   c. six
   d. eight

3. What is the standard(s) for the design of a boiler BMS?
   a. NFPA Series 8500
   b. NFPA 85
   c. NFPA 86 Series
   d. Pressure vessel codes

4. The NFPA 85 boiler code permits multiple fuel firing.
   a. True
   b. False

5. The BMS is the final control system to prevent an incident.
   a. True
   b. False

6. What is the most common cause of boiler explosions?
   a. Fuel rich condition in a boiler system
   b. Equipment failure
   c. Human error

7. What is the standard for ovens, furnaces?
   a. NFPA 85
   b. NFPA 86
   c. NFPA 87

8. Three transmitters are required for draft control.
   a. On all boilers with ID fans
   b. If the furnace and flue gas system can exceed the maximum head capacity
of the ID fan at ambient temperature.
c. If the FD fan vanes / damper will go fully closed.

9. Is it satisfactory to use the master fuel trip logic system as the master fuel trip?
   a. True
   b. False

10. The purge of a multiple burner boiler is complete after:
    a. 5 minutes
    b. 5 air changes
    c. 5 air changes for at least 5 minutes
    d. When the operator is ready to admit fuel

11. A temperature sensor is required to detect high temperature in the piping from the pulverizer to the boiler.
    a. True
    b. False

12. Re-purge of a multiple burner boiler is required after a:
    a. Loss of all flame
    b. Failure of the first igniter to ignite
    c. If an igniter is not ignited 10 seconds after purge is complete.
    d. All of the above

13. The purge that is required for a single burner boiler is the same as the purge required for a multiple burner boiler?
    a. True
    b. False

14. What is considered to be failsafe?
    a. Energize to trip
    b. De-energize to trip

15. How many seconds are required for proof of heavy oil flame?
    a. 10
    b. 15
    c. 20

16. How many seconds are required for proof of light oil flame?
    a. 10
    b. 15
    c. 20

17. NFPA 86 includes heaters
    a. True
    b. False

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1. d
2. a
3. b
4. a
5. a
6. c
7. b
8. b
9. b
10. c
11. a
12. a
13. b
14. b
15. b
16. a
17. b