Unit 18 EWR

Oil and Gas Heating Systems

1. What are the two main types of oil and gas home heating systems?
2. What are the two main tasks for electricians when installing a packaged heating unit?
3. Which component in a hot water heating system ensures the circulating water maintains a satisfactory temperature?
4. Which component in a hot water furnace system will shut down the system if ignition is not achieved after startup?
5. What are some other names for the combustion head in a furnace?
6. What functions of a furnace are controlled by a microprocessor controller?
7. Why does a blower fan control delay the blower for a few seconds when the burner starts?
8. What device on a hot water furnace keeps water from circulating by gravity?
9. What is the purpose of a heat exchanger?
10. What is the action of a high-temperature limit control in a hot air furnace?
11. What type of ignition is used on most energy-efficient gas furnaces?
12. What type of heating system involves circulating a hot liquid through a closed series of pipes?
13. What type of ignition allows the device to be on when the burner is running?
14. What type of ignition allows the device to be on only until flame is established?
15. What is the name given to the system where a circuit board manages the sequence of events to allow the burner to operate safely?
16. What is the action of a low-water control?
17. How are different spray patterns created for oil furnaces?
18. Which furnace component monitors safety controls like the high-limit switch and flame detector?
19. How is water or steam flow to different parts of a building controlled?
20. What are some of the safety controls on furnaces and boilers?
21. When power is removed from a normally closed solenoid, how is the valve returned to the closed position?
22. What device is actually controlled by the low-voltage thermostat in a furnace?
23. What happens on the cold end of a thermocouple when the opposite end is heated?
24. What is the term used to describe a group of thermocouples connected in series?
25. What are some unsuitable locations for thermostats?
26. What precaution should be taken when installing a mercury-bulb thermostat?
27. What should be done with a broken or worn out mercury thermostat?
28. What is the class given to a transformer on a furnace system? What section of the CEC deals with this type of wiring?
29. What is the main characteristic of a self-generating system used on decorative gas fireplaces?
30. Is a breaker in a panelboard suitable for use as a disconnecting means on a furnace circuit?
31. How is a circuit classified as to whether it is class 1 or class 2?
32. Is control circuitry that is completely contained in the equipment Class 1 or Class 2 rated?

33. What is the maximum OC protection for No. 18 conductors in a Class 1 circuit when run between pieces of equipment?

34. What is the maximum VA rating of Class 1 extra-low voltage power circuits?

35. What is the maximum allowable ampacity for No. 22 Copper conductors (2 in a cable) in a Class 2 circuit?

36. What is the maximum allowable ampacity for No. 16 Copper conductors (2 in a cable) in a Class 2 circuit with an ambient temperature of 45 degrees C?

37. Class 2 circuit conductors may be run in the same raceway as the power conductors if the insulation is rated at the same voltage as the power conductors. True or False