

Journeyman Gas Fitters Exam

1. What are the number of inspections required by the IFGC ?
 - a. 2
 - b. 3
 - c. 4
 - d. 6

2. What is the maximum distance between pipe supports for $\frac{3}{4}$ " steel piping?
 - a. 6 Ft.
 - b. 12 Ft.
 - c. 8 Ft.
 - d. 16 Ft.

3. What best describes make-up air?
 - a. The air that freshens the boiler system @ 10 psi.
 - b. Air that always has to be exhausted through the roof.
 - c. Air that is provided to replace air being exhausted.
 - d. Air that is provided only on explosive lighting systems.

4. On outdoor opening size, the minimum dimension of air openings shall not be less than?
 - a. 12 inches.
 - b. 6 inches.
 - c. 7 inches.
 - d. 3 inches.

5. On conduit with one end terminating outdoors, the conduit shall extend not less than _____ beyond the point where the pipe emerges from the floor?
 - a. 16 inches
 - b. 2 inches
 - c. 6 inches
 - d. 4 inches

6. Where piping other than steel piping is used for gas piping, and passes through holes or notches in wood studs, a protective shield is used having a minimum thickness of?
 - a. 16 gage
 - b. 12 gage
 - c. 24 gage
 - d. 37 gage

7. What is the approximate length of threaded portion for 2 inch metallic pipe?
 - a. 1-1/2"
 - b. 1"
 - c. 1-1/4"
 - d. 2"

8. On 1/2" smooth wall tubing, what is the required spacing of supports?
 - a. 6 feet.
 - b. 7 feet.
 - c. 5 feet.
 - d. 4 feet.

9. What best describes a meter?
 - a. The instrument installed to measure the volume of gas delivered through it.
 - b. A charging device.
 - c. An instrument used to regulate gas pressure.
 - d. A device used to measure gas pressure.

10. The standard method for figuring indoor combustion air, the minimum required volume shall be?
 - a. 100 cubic feet per 1,000 Btu/h
 - b. 70 cubic feet per 2,000 Btu/h
 - c. 50 cubic feet per 3,000 Btu/h
 - d. 50 cubic feet per 1,000 Btu/h

11. For other than steel pipe, exposed piping shall be identified by a yellow label marked GAS in black letters; the marking shall be spaced at intervals not exceeding?
 - a. 6 Ft.
 - b. 3 Ft.
 - c. 8 Ft.
 - d. 5 Ft.

12. The shut-off valve installed at a manifold shall be located within _ feet of the appliance?
 - a. 20 Ft.
 - b. 30 Ft.
 - c. 40 Ft.
 - d. 50 Ft.

13. 27.7 inch water column equals?
- a. 6 psi.
 - b. 2 psi.
 - c. 1 psi.
 - d. 9 psi.
14. What type of venting system does not depend on a fan or power to remove flue gases?
- a. Mechanical draft
 - b. Induced draft
 - c. Natural draft
 - d. Blow down method draft
15. The approximate number of threads to be cut for $\frac{1}{2}$ " metallic gas pipe?
- a. 12
 - b. 10
 - c. 16
 - d. 8
16. The minimum burial depth for individual outside appliances shall be installed a minimum of _____ inches below finished grade?
- a. 8
 - b. 10
 - c. 12
 - d. 16
17. When testing a gas system the test pressure in psig shall never be less than?
- a. 5 psig
 - b. 6 psig
 - c. 2 psig
 - d. 3 psig
18. The minimum AWG for a tracer wire used for non-metallic piping shall not be less than?
- a. 18 AWG
 - b. 16 AWG
 - c. 24 AWG
 - d. 20 AWG

19. What best describes a pilot?
- A flame that extends the inter portion of all water heaters.
 - A flame that is utilized to ignite the gas at the main burner or burners.
 - A flame who's primary purpose is to send flue gases to the outside air.
 - A natural flame utilized to ignite LP gas stoves and other related electric devices.
20. Appliances located in private garages shall be installed with a minimum clearance of _____ feet above the floor?
- 12
 - 16
 - 6
 - 7
21. The minimum service space required for appliances installed in attics?
- 40 inches
 - 30 x 30 inches
 - 20 x 30 inches
 - 36 x 36 inches
22. Condensate waste and drain lines for drain pans shall not be less than?
- $\frac{1}{2}$ "
 - 1"
 - 2"
 - $\frac{3}{4}$ "
23. The maximum length of a fuel piping connector is?
- 3 feet
 - 12 feet
 - 6 feet
 - 8 feet
24. Exit terminals of mechanical draft systems shall not be less than _____ feet above finished ground level?
- 5
 - 7
 - 9
 - 12

25. The minimum number of fittings used on a center to center measurement?
- 3
 - 1
 - 4
 - 2
26. All annual certificates or registrations shall expire on _____ of the year in which they are issued?
- June 30
 - December 1
 - July 31
 - December 31
27. What best describes a device used for controlling and maintaining a uniform supply pressure?
- Thermostat
 - Relief valve
 - Regulator
 - Pilot
28. Holes bored in joist shall not be within _____ inches of the top and bottom of the joist.
- 1
 - 2
 - 3
 - 4
29. Appliance located in private garages shall be installed with a minimum clearance of _____ feet above the floor.
- 8
 - 10
 - 6
 - 7
30. According to board rules water heaters may be exchanged by a certified plumbing contractor or by a certified gas fitting contractor.
- True
 - False

31. A minimum clearance of _____ inches shall be maintained between the cooking top and combustible materials above the hood.
- 24"
 - 30"
 - 22"
 - 5"
32. On a single category one appliance using a type B double- wall gas, vent connected directly to the vent, what is the NAT. Max using 20ft H with a 5 ft. L on a 6 inch vent?
- 228,000
 - 239,000
 - 241,000
 - 144,000
33. According to the IFGC what is the minimum height requirement for the gas vent termination, from the roof to lowest discharge opening where the roof slope is in excess of 8/12 to 9/12?
- 1.0
 - 1.5
 - 2.0
 - 2.5
34. Which method of pipe sizing is determined by using the longest length of piping for the point of delivery to the most remote outlet?
- Branch length method
 - Longest length method
 - Maximum gas demand
 - Table 402.4 (1)
35. According to the IFGC pipe joints shall be
- Threaded
 - Flanged
 - Welded
 - All the above

36. Using two or more category one appliances with a type B double-wall connector, venting with type B double-wall gas vent; what is the required common vent size when using a vent height of 20 feet and a NAT + NAT capacity of 229,000 BTU/H?
- 4
 - 5
 - 6
 - 7
37. To determine the size of piping used in a gas piping system, the following factors must be considered.
- Maximum gas demand
 - Specific gravity of the gas
 - Diversity factor
 - All of the above
38. A furnace shall not be placed so that a door, drapery or similar object cannot be nearer than ____ inches to any portion of the register of the furnace.
- 10
 - 12
 - 14
 - 16
39. What is the maximum horizontal vent connector length in feet, with a vent connector diameter of 4"?
- 4-1/2'
 - 6'
 - 7-1/2'
 - 9'
40. Where communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of not less than ____.
- 1 square inch per 4000 BTU/H
 - 1 square inch per 2000 BTU/H
 - 2 square inches per 4000 BTU/H
 - 2 square inches per 2000 BTU/H

41. Using the standard method for combustion, ventilation and dilution air, the minimum required volume shall be _____ of the appliance input rating.
- 50 cubic feet per 1000 BTU/H
 - 25 cubic feet per 2000 BTU/H
 - 100 cubic feet per 5000 BTU/H
 - 75 cubic feet per 75 BTU/H

Refer to drawing 1 for the remainder of the questions using the longest length method.

42. Piping natural gas using schedule 40 metallic pipe with an inlet pressure less than 2 PSI, a pressure drop of 0.5 inches water column and a specific gravity of 0.60; using the longest length method, what is the minimum nominal pipe size required at point C?
- $\frac{1}{2}$ "
 - $\frac{3}{4}$ "
 - 1"
 - 2"
43. Piping natural gas using CSST, with an inlet pressure less than 2 PSI, a pressure drop of 0.5 inches water column and a specific gravity of 0.60 using the longest length method, what tube size is required at point G?
- 31
 - 39
 - 37
 - 30
44. Piping natural gas using semi-rigid copper tubing, with an inlet pressure less than 2 PSI, a pressure drop of 0.5 inches water column and a specific gravity of 0.60 using the longest length method, what size K & L copper is required at point D?
- 1"
 - 1-1/4"
 - 1-1/2"
 - 1-3/8"
45. Piping natural gas using schedule 40 metallic pipe, with an inlet pressure of 2.0 PSI and a pressure drop of 1.0 PSI, with a specific gravity of 0.60; What nominal pipe size is required at point C?
- 1"
 - $\frac{3}{4}$ "
 - $\frac{1}{2}$ "
 - 1-1/4"

46. Piping natural gas using schedule 40 metallic pipe, with an inlet pressure of 2.0 PSI and a pressure drop of 1.0 PSI, with a specific gravity of 0.60; What nominal pipe size is required at point A?
- 1"
 - 1-1/4"
 - 1-1/2"
 - 1/2"
47. Piping natural gas using CSST, with an inlet pressure less than 2 PSI, a pressure drop of 0.5 inches of water column and a specific gravity of 0.60; what tube size is required at point E?
- 31
 - 37
 - 39
 - 46
48. Piping natural gas using polyethylene plastic pipe with an inlet pressure of 2.0 PSI and a pressure drop of 1.0 PSI with a specific gravity of 0.60; what is the nominal OD of the pipe required at point C?
- 1/2"
 - 3/4"
 - 1"
 - 1-1/4"
49. Piping natural gas using semi-ridged copper tubing with an inlet pressure less than 2 PSI and a pressure drop of 0.5 inches of water column and a specific gravity of 0.60; what size K & L copper tubing is required at point D?
- 1-1/8"
 - 1-3/8"
 - 1-1/4"
 - 1-1/2"
50. Piping natural gas using schedule 40 metallic pipe, with an inlet pressure less than 2 PSI and a pressure drop of 0.5 inches of water column with a specific gravity of 0.60; what is the nominal pipe size required at point A?
- 1"
 - 1-1/4"
 - 1-1/2"
 - 2"

