

**CITY OF LONGMONT
BUILDING INSPECTION DIVISION**

**2011 MECHANICAL CONTRACTOR SELF-STUDY GUIDE
Based On the 2009 International Residential, Mechanical, Fuel Gas, and Energy
Conservation Codes
(and local amendments to these codes)**

Name _____ Date _____

Company Name _____ License # _____

**YOU WILL BE CONTACTED IF YOU DID NOT RECEIVE A 65% SCORE
AND WILL BE ASKED TO RE-TAKE THIS STUDY GUIDE**

This Self-Study Guide is provided by the Longmont Building Inspection Division. It is intended to be an exercise in using the codes to keep THE TESTED qualified individuals current in the latest codes in use, in Longmont. When complete, please turn this guide in to the Building Inspection Division for review and credit toward your license renewal by June 30, 2011.

- 1) All water heaters shall be capable of being removed without ____.
 - a.) the use of special tools
 - b.) removing permanent construction
 - c.) special knowledge or effort
 - d.) removing doors

- 2.) For which of the following locations is the installation of gas piping not specifically prohibited?
 - a.) adjacent to an exterior stairway
 - b.) in a supply air duct
 - c.) in an elevator shaft
 - d.) through a clothes chute

- 3.) The minimum duration of a pressure test for the gas piping of a new single family residential building shall be ____ minutes.
 - a) 30
 - b) 20
 - c) 15
 - d) 10

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- 4.) A permit shall expire if the work has not been inspected or if work has been abandoned for more than ___ days.
- a.) 365
 - b.) 180
 - c.) 90
 - d.) 60
5. Assume that a fuel-gas appliance requires a minimum clearance without protection of 36 inches above the appliance to combustible material. If 1/2 inch thick insulation board over 1-inch glass fiber batts is used as protection, the minimum clearance may be reduced to ___ inches.
- a.) 9
 - b.) 12
 - c.) 18
 - d.) 24
- 6.) The minimum required thickness for an eight inch diameter chimney connector for a high-heat appliance is number ___ gage.
- a.) 16
 - b.) 14
 - c.) 12
 - d.) 10
- 7.) A combustion air opening for a central furnace shall be unobstructed for a minimum distance of ___ inches in front of the opening.
- a.) 4
 - b.) 6
 - c.) 12
 - d.) 18
- 8.) In Longmont, carbon monoxide detectors are required in dwelling units__.
- a) where fuel fired appliances are installed
 - b) that have attached garages
 - c) either a or b
 - d) in bedrooms
- 9.) Discharge piping beyond the pressure relief valve of a boiler shall terminate a maximum of ___ inches above the floor or into an open receptor.
- a) 3
 - b) 6
 - c) 12
 - d) 18

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- 10.) For other than direct vent appliances, the vent termination for a mechanical draft system shall be mounted a minimum of ___ feet horizontally from a gas meter.
- a.) 3.5
 - b.) 3
 - c.) 2
 - d.) 1.5
- 11.) A special gas vent is a gas vent used to convey combustion products from a Category ___ appliance.
- a.) II
 - b.) III
 - c.) IV
 - d.) all the above
- 12.) Supports for 3/4 inch steel gas pipe shall be provided at maximum intervals of ___ feet.
- a.) 4
 - b.) 6
 - c.) 8
 - d.) 10
- 13.) Energy recovery ventilation systems shall be provided with a means of access to the heat exchanger as required for service, maintenance, repair or__.
- a.) replacement
 - b.) adjustment
 - c.) cleaning
 - d.) inspection
- 14.) Heat exchangers for solar energy systems shall be approved ___.
- a.) by a licensed mechanical engineer
 - b.) by the manufacturer
 - c.) for the anticipated heat and pressure ranges
 - d.) for the intended use
- 15.) A steam boiler water gauge shall be installed so that the ___ is at the normal boiler water level.
- a.) low point
 - b.) midpoint
 - c.) third-point
 - d.) high point

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- 16.) A sauna room provided with a gas-fired sauna heater shall be provided with a minimum__ inch by __ inch ventilation opening located near the top of the door into the sauna room.
- a.) 4, 8
 - b.) 4, 12
 - c.) 8, 8
 - d.) 8, 12
- 17.) In Longmont, the replacement of a furnace or water heater in a home requires the installation of a combustion air duct with a minimum area of __ square inches.
- a.) 7.07
 - b.) 12.57
 - c.) 19.63
 - d.) 28.27
- 18.) Annealed temper copper tube used in refrigerant piping is limited to a maximum size of __ inches in diameter.
- a) 2
 - b) 1.75
 - c) 1.5
 - d) 1.25
- 19.) Failure to obtain a permit before starting work on a project could result in____.
- a.) A hearing before the Master Board of Appeals
 - b.) Suspension or revocation of your license
 - c.) A summons issued for you to appear in court
 - d.) All of the above
- 20.) The union fitting required for gas-fired appliances connected by rigid metallic pipe shall be accessible and located a maximum of __ feet from the appliance.
- a.) 3
 - b.) 5
 - c.) 6
 - d.) 8