

Commercial Mechanical Inspector

International Code Council M2

Version Demo

Total Demo Questions: 6

Total Premium Questions: 64

Buy Premium PDF

<https://passqueen.com>

support@passqueen.com

Topic Break Down

Topic	No. of Questions
Topic 1, General Knowledge and Regulations	5
Topic 2, Ventilation	2
Topic 3, Exhaust Systems	16
Topic 4, Duct Systems	8
Topic 5, Combustion Air	3
Topic 6, Chimneys and Vents	10
Topic 7, Appliances and Equipment	12
Topic 8, Fuel Supply Systems	8
Total	64

QUESTION NO: 1

An air-conditioning unit is installed in an attic above a finished gypsum-board ceiling. Overflow from the primary condensate drain could damage the ceiling. Which installation provides an acceptable secondary means of protection?

- A. An auxiliary drain pan with a separate drain.
- B. An auxiliary drain pan connected to the primary condensate drain.
- C. A larger primary condensate drain pipe without secondary protection.
- D. A removable cap installed at the end of the primary condensate drain.

ANSWER: A

Explanation:

An auxiliary drain pan with a separate drain. Where condensate overflow could damage building components, the code requires an approved secondary means of protection. An auxiliary pan installed beneath the equipment and drained independently is one permitted method. Connecting the auxiliary pan to the primary drain does not provide independent protection, and relying solely on the primary drain cleanout does not address an overflow condition.

QUESTION NO: 2

A return-air grille is shown in a toilet room to provide 250 cfm of return air to a central air-handling system. What is the proper inspection disposition?

- A. Approve the grille if the return duct is insulated.
- B. Approve the grille if a high-efficiency filter is installed at the air-handling unit.
- C. Reject the return-air grille in the toilet room.
- D. Approve the grille if the toilet-room exhaust fan is interlocked with the air handler.

ANSWER: C

Explanation:

Reject the return-air grille in the toilet room. Return air is not permitted to be taken from toilet rooms, bathrooms, kitchens, garages and certain other listed spaces. Air from a toilet room is intended to be exhausted outdoors rather than recirculated through an air-handling system. Increasing filtration or adding a balancing damper does not make the prohibited return location acceptable.

QUESTION NO: 3

Exhaust outlets that terminate at a temperature exceeding 600°F shall be designed as a:

- A. Class I duct.
- B. Class II duct.
- C. Class III duct.
- D. Chimney complying with Chapter 8.

ANSWER: D

Explanation:

“Chimney complying with Chapter 8” is correct because the International Mechanical Code specifically treats an exhaust outlet terminating at a temperature greater than 600°F (316°C) as a chimney application. IMC Section 501.3.3 establishes this requirement and directs that the chimney be designed in accordance with Chapter 8. The temperature criterion is strictly “exceeding 600°F,” so the provision applies only when the terminating exhaust temperature is above that value. Chapter 8 provides the applicable construction, material, installation, clearance, and support requirements for chimneys, allowing the selected chimney system to be appropriate for the temperature and appliance or process conditions involved. The code does not limit this requirement to one particular chimney material in the question’s stated condition; therefore, identifying the required design category as a Chapter 8-compliant chimney accurately reflects the IMC language. For the controlling exhaust-discharge provision, see [IMC Chapter 5—Exhaust Systems](#). The chimney design provisions are located in [IMC Chapter 8—Chimneys and Vents](#).

QUESTION NO: 4

A draft-hood-equipped gas appliance has a single-wall vent connector that passes through a suspended ceiling before connecting to a listed Type B vent in the space above. What is required?

- A. Insulate the vent connector where it passes through the ceiling.
- B. Replace the ceiling-penetrating portion with an approved vent or chimney system.
- C. Install a manual damper immediately below the ceiling penetration.
- D. Increase the vent connector clearance above the ceiling to 1 inch.

ANSWER: B

Explanation:

The portion passing through the ceiling must be replaced with an approved vent or chimney system. A vent connector is not permitted to pass through a floor or ceiling. The vent connector is the connection between the appliance and the vent or chimney, while the listed Type B vent is a complete venting system intended for installation through building construction in accordance with its listing. Extending the single-wall connector through the ceiling, even if it is insulated or enclosed, does not comply.

QUESTION NO: 5

A contractor installs a manually operated damper in the vent connector serving a draft-hood-equipped gas appliance so the building operator can reduce the draft during mild weather. How should the installation be evaluated?

- A. Approve the damper if it is installed downstream of the draft hood.
- B. Approve the damper if it is marked with an open-position indicator.
- C. Approve the damper if it is accessible only to maintenance personnel.
- D. Reject the manual damper in the vent connector.

ANSWER: D

Explanation:

The manual damper is not permitted in the vent connector. A manual damper can obstruct the flow of combustion products and interfere with proper venting of a gas appliance. Manual dampers are prohibited in gas-appliance vent connectors and chimney connectors. The presence of a draft hood does not permit a manually operated restriction in the venting system.

QUESTION NO: 6

Ducts shall not be permitted to be connected to:

- A. an evaporative cooler.
- B. a vented wall furnace.
- C. a gravity-type warm-air furnace.
- D. a high-static-pressure-type unit heater.

ANSWER: B

Explanation:

A vented wall furnace is the correct answer because the International Mechanical Code treats this appliance as a self-contained, room-heating appliance rather than as a conventional central forced-air furnace. The IMC provision for vented wall furnaces expressly prohibits attaching ducts to a vented wall furnace. This protects the appliance's listed and intended operating characteristics, including its combustion-air, venting, heat-transfer, and circulation design. A wall furnace is ordinarily intended to deliver heat directly to the space in which it is installed, so connecting a duct system could alter airflow and create conditions outside the appliance's listing or installation instructions. The applicable IMC section also recognizes a limited exception where a vented wall furnace is specifically listed and labeled for use with ducts; that exception does not change the general code rule being tested. In inspection practice, the appliance listing and manufacturer installation instructions must be reviewed whenever a ducted connection is proposed. See the International Mechanical Code chapter addressing specific appliances, including vented wall furnaces, at [ICC Digital Codes—IMC Chapter 9](#). ICC's code resources are also available through [ICC I-Codes](#).