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36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

CONNECTICUT OCCUPATIONAL TRADES

YTLQVDNJ

CT D1 Limited Warm Air/ac

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for CONNECTICUT OCCUPATIONAL TRADES YTLQVDNJ , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, YTLQVDNJ
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

QUESTION 1

MULTIPLE CHOICE

When sizing ductwork for a forced-air heating system, which of the following factors must be considered? (Choose three.)

- ☒ **A** CFM (cubic feet per minute) air requirements of the heat source
- ☒ **B** Equivalent length of duct runs including fittings
- ☒ **C** Allowable friction loss per 100 feet of duct
- ☐ **D** Color of the duct insulation
- ☐ **E** Available static pressure of the blower

ANSWER A • B • C

WHY Duct sizing depends on the CFM required by the heat source, the equivalent length of the duct run (including friction losses from fittings), and the allowable friction loss rate. Color of insulation and static pressure alone do not determine duct size, although static pressure is related to system design.

QUESTION 2

MULTIPLE CHOICE

Under EPA Section 608 regulations, which of the following requirements apply to technicians working with refrigerants? (Choose two.)

- ☒ **A** Recovery of refrigerant before opening or disposing of appliances
- ☒ **B** Certification appropriate to the type of equipment being serviced
- ☐ **C** Mandatory use of R-22 in all residential systems
- ☐ **D** Venting refrigerants to atmosphere during repair

ANSWER A • B

WHY EPA Section 608 requires recovery of refrigerant before opening appliances and certification based on appliance type (Type I, II, III, or Universal). R-22 is being phased out and venting refrigerants is prohibited.

QUESTION 3

TRUE FALSE

Warm air furnaces installed in residential garages must be elevated so that the burners and ignition sources are at least 18 inches above the floor.

☒ **A** True☐ **B** False**ANSWER A**

WHY Per the IRC and most manufacturer specifications, gas-fired appliances in garages must have ignition sources located at least 18 inches above the floor to prevent ignition of gasoline or other flammable vapors that are heavier than air and accumulate at floor level.

QUESTION 4

SINGLE CHOICE

A gas-fired warm air furnace installed in a confined space requires combustion air from outside the building. What is the minimum free area required for each combustion air opening serving a space containing only the furnace?

☒ **A** 1 square inch per 1,000 BTU input☐ **B** 2 square inches per 1,000 BTU input☐ **C** 10 square inches per 1,000 BTU input☐ **D** 100 square inches per 1,000 BTU input**ANSWER A**

WHY For combustion air openings directly to the outdoors (two openings, one high and one low), each opening must have a minimum free area of 1 square inch per 1,000 BTU/h of input. This is based on the International Fuel Gas Code and NFPA 54.

QUESTION 5

SINGLE CHOICE

A Category I gas furnace venting into a masonry chimney must use which type of vent connector material at the point where it enters the chimney?

- ☐ A Single-wall metal pipe
- ☒ B Type B double-wall vent pipe for the full connector length
- ☐ C PVC plastic pipe
- ☐ D Flexible aluminum duct

ANSWER B

WHY The vent connector from a Category I furnace to the masonry chimney must be Type B double-wall pipe for the full length of the connector. Single-wall pipe requires additional clearances and is not permitted at the chimney penetration in most jurisdictions. PVC is used for direct-vent (Category IV) appliances, not Category I.

QUESTION 6

SINGLE CHOICE

According to NFPA 31 and typical manufacturer specifications, what is the minimum required clearance between a listed oil-fired warm air furnace and adjacent combustible construction when the clearance is not specified on the nameplate?

- ☐ A 6 inches
- ☐ B 12 inches
- ☒ C 18 inches
- ☐ D 24 inches

ANSWER C

WHY NFPA 31 requires a minimum of 18 inches of clearance from an oil-fired furnace to combustibles unless a smaller clearance is specifically listed on the equipment nameplate (with reduced clearances achieved through approved methods).

QUESTION 7

SINGLE CHOICE

When performing a Manual J heat loss calculation for a residence, which factor is the primary basis for determining the heating load of each room?

- ☐ A The square footage of the room only
- ☐ B The number of windows in the room only
- ☒ C The temperature difference between inside and outside design conditions, U-values of building components, and areas of those components
- ☐ D The age of the home

ANSWER C

WHY Manual J heat loss is calculated using the temperature differential (ΔT), the U-value (thermal transmittance) of each building component (walls, windows, doors, ceiling, floor), and the area of each component. Square footage alone, window count alone, and home age do not accurately determine heating load.

QUESTION 8

SINGLE CHOICE

A condensing gas furnace produces acidic condensate that must be drained. What is the required method of handling this condensate before disposal?

- ☐ A Discharge directly into a sanitary sewer line with no treatment
- ☒ B Neutralize with a pH-neutralizing device or condensate trap before disposal
- ☐ C Pump it into the fresh air intake
- ☐ D Allow it to evaporate in the furnace vestibule

ANSWER B

WHY Condensate from condensing furnaces is acidic (low pH) and typically must be neutralized before disposal, or routed through an approved trap to an appropriate drain. Many local codes require pH neutralization to protect plumbing and municipal wastewater systems. Discharging untreated condensate can violate plumbing codes.

QUESTION 9

SINGLE CHOICE

On a typical 24-volt thermostat wiring color code, which color conductor is commonly used for the common (C) terminal that provides continuous power to a smart thermostat?

- ☐ A Red
- ☐ B White
- ☒ C Blue
- ☐ D Yellow

ANSWER C

WHY Industry-standard thermostat wire color coding uses blue for the common (C) terminal providing 24VAC continuous power to the thermostat. Red is typically R (power), white is W (heat), yellow is Y (cooling), and green is G (fan).