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

PRACTICE QUESTIONS

ARIZONA REGISTRAR OF CONTRACTORS

SBFGK82X

AZ R-45 Sheet Metal

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for ARIZONA REGISTRAR OF CONTRACTORS **SBFGK82X**, 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, **SBFGK82X**
- 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 fabricating rectangular sheet metal duct, which two of the following factors must be considered to determine the proper gauge (metal thickness) per SMACNA HVAC Duct Construction Standards? (Choose two.)

- ☒ **A** The longest side of the rectangular duct
- ☐ **B** The color of the paint specified for the duct exterior
- ☒ **C** The pressure class (static pressure) the system is designed for
- ☐ **D** The duct seam type (e.g., Pittsburgh lock vs. drive cleat)
- ☐ **E** The brand of HVAC equipment being connected

ANSWER A - C

WHY Per SMACNA HVAC Duct Construction Standards, rectangular duct gauge is selected based on the duct's largest dimension (longest side) and the pressure class (in. w.g.) at which the system operates. Paint color, equipment brand, and seam style alone do not determine required sheet metal thickness.

QUESTION 2

MULTIPLE CHOICE

Which two of the following are required code-related considerations when installing a fire damper in a sheet metal duct penetrating a fire-rated wall? (Choose two.)

- ☐ **A** The damper must be installed within the plane of the wall or offset per the listing
- ☒ **B** An access door large enough to inspect and reset the damper must be provided
- ☐ **C** The duct must be insulated with a minimum R-19 fiberglass wrap
- ☒ **D** The damper must be listed for the specific fire-resistance rating of the assembly
- ☐ **E** The damper blades must be painted to match the wall finish

ANSWER B - D

WHY Fire dampers must be installed per their UL listing (typically within the plane of the wall or per the listed installation instructions) and must be listed for the required fire-resistance rating of the wall assembly. An access door of adequate size is required to allow inspection, testing, and resetting of the damper. Insulation and paint are not code drivers for damper selection or installation.

QUESTION 3

SINGLE CHOICE

Per ASHRAE/SMACNA equal friction method for duct sizing, if the designer selects a higher friction rate (e.g., 0.10 in. w.g. per 100 ft instead of 0.08 in. w.g. per 100 ft), what is the typical effect on the duct system?

- ☐ A Duct sizes increase and fan energy use decreases
- ☒ B Duct sizes decrease and fan energy use increases
- ☐ C Both duct sizes and fan energy use increase
- ☐ D Duct sizes and fan energy use are unaffected

ANSWER B

WHY Increasing the friction rate allows the designer to use smaller duct cross-sections (less metal), but the higher velocity and higher pressure drop require the fan to produce more static pressure, increasing fan energy consumption. There is a direct trade-off between initial material cost (smaller ducts) and long-term operating cost (higher fan energy).

QUESTION 4

SINGLE CHOICE

Which personal protective equipment (PPE) item is most important to wear when operating a sheet metal power brake to bend galvanized steel?

- ☐ A Hearing protection
- ☒ B Cut-resistant gloves
- ☐ C A respirator with P100 filters
- ☐ D A high-visibility vest

ANSWER B

WHY Sheet metal power brakes bend sharp-edged galvanized sheet; cut-resistant gloves protect the hands from lacerations while feeding, aligning, and removing the workpiece. Hearing protection, respirators, and high-visibility vests may be appropriate for other tasks but cut-resistant gloves are the primary PPE for brake operations.

QUESTION 5

SINGLE CHOICE

Per SMACNA HVAC Duct Construction Standards and the International Mechanical Code (IMC), what class of duct sealing is typically required for ducts operating at pressures above 3 in. w.g.?

- ☒ **A** Class A
- ☐ B Class B
- ☐ C Class C
- ☐ D Class D

ANSWER A

WHY SMACNA classifies duct sealings as A, B, and C, with Class A being the most stringent. Class A sealing (sealing all transverse joints, longitudinal seams, and penetrations) is generally required for high-pressure systems (typically above 3 in. w.g.), Class B for medium-pressure (1–3 in. w.g.), and Class C for low-pressure residential/standard systems.

QUESTION 6

SINGLE CHOICE

Per SMACNA HVAC Duct Construction Standards, what is the maximum spacing for supporting horizontal rectangular sheet metal ducts with 1-1/2 in. x 1/8 in. galvanized steel strap hangers?

- ☐ A Every 4 ft
- ☐ B Every 6 ft
- ☒ **C** Every 8 ft
- ☐ D Every 12 ft

ANSWER C

WHY SMACNA HVAC Duct Construction Standards (Metal and Flexible) specifies that 1-1/2 in. x 1/8 in. galvanized strap hangers for rectangular ducts be installed at a maximum spacing of approximately 8 ft on center, with the strap extending at least 1 in. up each side of the duct. Larger spacings are permitted only with engineered supports or larger hanger sizes.

QUESTION 7

SINGLE CHOICE

When performing a sheet metal takeoff from a mechanical plan set, which sheet most commonly contains the ductwork routing, sizes, and CFM requirements?

- ☐ A The architectural floor plan
- ☒ B The mechanical HVAC plan and/or sheet metal shop drawing
- ☐ C The structural framing plan
- ☐ D The electrical single-line diagram

ANSWER B

WHY Duct routing, CFM (airflow) values, register/diffuser locations, and duct sizes are shown on the mechanical HVAC plan sheets (and detailed further on sheet metal shop drawings produced by the contractor). Architectural, structural, and electrical sheets do not contain the duct routing information required for a sheet metal takeoff.

QUESTION 8

SINGLE CHOICE

Under the Arizona Registrar of Contractors rules, a contractor holding the R-45 (Sheet Metal) classification is generally authorized to perform which of the following scopes of work?

- ☐ A Installation and repair of structural steel framing for buildings
- ☒ B Fabrication, installation, and repair of HVAC ducts, gutters, flashing, and other sheet metal work incidental to building construction
- ☐ C Installation of residential plumbing fixtures and water heaters
- ☐ D Installation of high-voltage electrical feeders and service equipment

ANSWER B

WHY The Arizona ROC R-45 Sheet Metal classification covers the fabrication, installation, alteration, and repair of sheet metal products used in building construction, including HVAC ductwork, gutters, downspouts, flashing, and related items. Structural steel, plumbing, and electrical work each require their own separate ROC classifications (e.g., A or B general, C-37 plumbing, C-11 electrical).

QUESTION 9

SINGLE CHOICE

Per the International Mechanical Code (IMC) and IECC energy conservation requirements, where supply and return ducts are located in unconditioned attics, what is the minimum required insulation R-value for the duct insulation?

- ☐ A R-4.2
- ☐ B R-6
- ☒ C R-8 (flexible duct out of plenum) or R-6 per the prevailing energy code for attic locations
- ☐ D R-19

ANSWER C

WHY The International Energy Conservation Code (IECC) and IMC require duct insulation in unconditioned spaces to meet minimum R-values (commonly R-8 for ducts in unconditioned attics in many climate zones, with R-6 permitted for some flexible ducts). R-4.2 and R-6 are below typical attic requirements, while R-19 is not required and would be unnecessarily thick for ductwork.