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PRACTICE QUESTIONS

ALASKA MECHANICAL

BMY5N9X4

AK Unlimited HVAC and Sheet Metal Mechanical
Administrator

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

WEB www.mometrix.net

SUPPORT support@mometrix.net

Before you begin

What this is

9 practice questions for ALASKA MECHANICAL BMY5N9X4 , 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, BMY5N9X4
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

An HVAC system installed in Alaska must comply with the mechanical code adopted by the Alaska Department of Labor, Division of Occupational Safety and Health. Which code currently serves as the primary adopted mechanical code for commercial and residential HVAC work in Alaska?

- ☐ A Uniform Mechanical Code (UMC)
- ☒ B International Mechanical Code (IMC)
- ☐ C National Mechanical Code (NMC)
- ☐ D International Plumbing Code (IPC)

ANSWER B

WHY Alaska adopts the International Mechanical Code (IMC), published by the International Code Council (ICC), as the basis for its mechanical code requirements. The Uniform Mechanical Code is not the adopted standard in Alaska, the National Mechanical Code does not exist, and the International Plumbing Code governs plumbing rather than mechanical/HVAC work.

QUESTION 2

SINGLE CHOICE

Before installing a new commercial rooftop HVAC unit in Alaska, which of the following must typically be obtained from the authority having jurisdiction (AHJ)?

- ☐ A A state-issued plumbing permit only
- ☒ B A mechanical permit issued by the AHJ, often accompanied by plan review
- ☐ C A federal EPA refrigerant license only
- ☐ D No permit is required if the work is performed by a licensed contractor

ANSWER B

WHY Mechanical work, including the installation of commercial HVAC equipment, generally requires a mechanical permit issued by the local or state authority having jurisdiction. Many AHJs also require plan review for commercial installations prior to issuing the permit. A plumbing permit, an EPA Section 608 certification, and contractor licensing address different regulatory areas and do not substitute for the required mechanical permit.

QUESTION 3

MULTIPLE CHOICE

When installing a Category IV condensing gas-fired appliance in a mechanical room, which of the following requirements must be addressed per the adopted mechanical code? (Choose two.)

- ☒ **A** The condensate disposal system must conform to code requirements for acidic condensate
- ☒ **B** The vent must be approved for positive pressure, condensing flue gas service
- ☐ **C** The appliance must be installed without any clearance to combustibles
- ☐ **D** The appliance must be located only in unconditioned spaces

ANSWER A • B

WHY Category IV appliances operate with positive vent pressure and produce acidic condensate, so the vent must be listed for positive-pressure condensing service and the condensate must be disposed of in accordance with code requirements (typically neutralization for acidic condensate). Combustible clearance requirements still apply (option C is incorrect), and Category IV appliances can be installed in conditioned or unconditioned spaces as long as manufacturer and code requirements are met (option D is incorrect).

QUESTION 4

SINGLE CHOICE

EPA Section 608 regulations require that technicians who maintain, service, repair, or dispose of refrigeration equipment containing regulated refrigerants must be certified. Which type of technician certification covers work on equipment with all refrigerant types and sizes?

- ☐ **A** Type I certification
- ☐ **B** Type II certification
- ☐ **C** Type III certification
- ☒ **D** Universal certification

ANSWER D

WHY Under EPA Section 608 of the Clean Air Act, Universal certification is required for technicians who work on equipment containing any type of regulated refrigerant at any size. Type I covers small appliances, Type II covers high- and very-high-pressure appliances (except small appliances and motor vehicle AC), and Type III historically covered low-pressure appliances. Universal covers the full scope of all three types.

QUESTION 5

SINGLE CHOICE

Sheet metal ducts installed in commercial buildings are typically required to be constructed of galvanized steel meeting a minimum coating designation. Which galvanized coating designation is most commonly specified by code for general sheet metal ductwork?

- ☐ A G-30
- ☐ B G-40
- ☒ C G-60
- ☐ D G-90

ANSWER C

WHY The International Mechanical Code and associated SMACNA standards typically reference galvanized steel with a minimum G-60 coating for general sheet metal ductwork used in HVAC systems. G-90 is heavier and often used for more corrosive environments, while G-30 and G-40 are below the typical minimum specified for general duct construction.

QUESTION 6

SINGLE CHOICE

Mechanical ventilation systems in commercial occupancies must comply with the ventilation rate requirements of which standard as referenced by the adopted mechanical code?

- ☒ A ASHRAE Standard 62.1
- ☐ B ASHRAE Standard 90.1
- ☐ C NFPA 90A
- ☐ D NFPA 96

ANSWER A

WHY Ventilation rate and indoor air quality requirements for commercial buildings are addressed by ASHRAE Standard 62.1, Ventilation for Acceptable Indoor Air Quality, which is referenced by the International Mechanical Code. ASHRAE 90.1 addresses energy efficiency, NFPA 90A addresses installation of air-conditioning and ventilating systems for fire protection, and NFPA 96 addresses commercial cooking operations.

QUESTION 7

MULTIPLE CHOICE

When installing a natural gas piping system for new commercial HVAC equipment in Alaska, which of the following requirements apply per the adopted fuel gas code? (Choose two.)

- ☒ **A** The piping system must be pressure-tested with air, nitrogen, or an inert gas before being placed in service
- ☒ **B** Pipe sizing must be based on the total connected load and pipe length per approved methods
- ☐ **C** Gas piping may be installed without any pressure test if the equipment is manufacturer-tested
- ☐ **D** Fuel gas piping may be run through any building space without restrictions

ANSWER A - B

WHY The International Fuel Gas Code (IFGC) requires that new gas piping systems be pressure-tested before being placed in service, using air, nitrogen, or an inert gas at a prescribed test pressure and duration, and that pipe sizing be determined by approved methods such as those in IFGC Chapter 4 based on connected load and equivalent length. Manufacturer equipment testing does not exempt the piping system from being tested (option C is incorrect), and fuel gas piping has specific restrictions on the spaces it may pass through (option D is incorrect).

QUESTION 8

SINGLE CHOICE

Mechanical administrators working with boiler and pressure vessel installations in Alaska must comply with requirements set forth by which of the following codes or standards?

- ☒ **A** ASME Boiler and Pressure Vessel Code
- ☐ **B** ASHRAE Guideline 36
- ☐ **C** NFPA 13
- ☐ **D** IMC Chapter 1

ANSWER A

WHY The ASME Boiler and Pressure Vessel Code (BPVC) is the primary standard governing the design, fabrication, inspection, and testing of boilers and pressure vessels. ASHRAE Guideline 36 addresses HVAC controls, NFPA 13 addresses fire sprinkler systems, and IMC Chapter 1 contains general administrative provisions but is not the construction standard for boilers and pressure vessels.

QUESTION 9

SINGLE CHOICE

Commercial HVAC systems installed in Alaska must comply with the energy efficiency provisions of the adopted energy code, which references which standard for commercial building energy efficiency?

- ☒ **A** ASHRAE Standard 90.1
- ☐ **B** ASHRAE Standard 62.1
- ☐ **C** ASHRAE Standard 55
- ☐ **D** ASHRAE Guideline 0

ANSWER A

WHY ASHRAE Standard 90.1, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings, is the commercial energy efficiency standard referenced by the International Energy Conservation Code (IECC) and applicable to commercial HVAC installations in Alaska. ASHRAE 62.1 addresses ventilation, 55 addresses thermal comfort, and Guideline 0 addresses the commissioning process.