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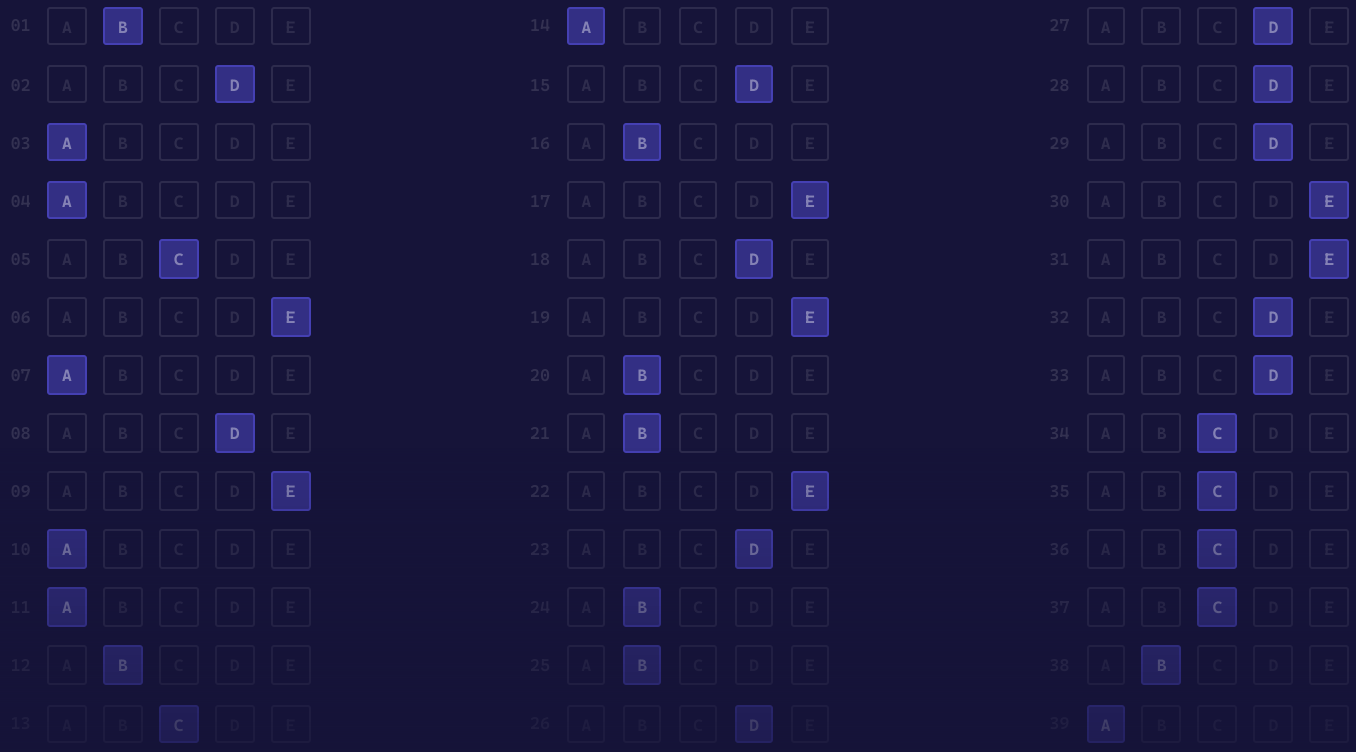

PRACTICE QUESTIONS

ALABAMA CONSTRUCTION

JGLW679K

AL Insulation Contractor

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

WEB www.mometrix.net

SUPPORT support@mometrix.net

Before you begin

What this is

9 practice questions for ALABAMA CONSTRUCTION `JGLW679K`, 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, `JGLW679K`
- the question number
- the email address on your order

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

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QUESTION 1 SINGLE CHOICE

Which type of insulation is most appropriate for insulating the interior of a residential duct system operating below ambient temperature to prevent condensation?

A Faced fiberglass batts

B Closed-cell spray polyurethane foam

C Loose-fill cellulose

D Mineral wool blankets with a vapor-permeable facing

ANSWER B

WHY Closed-cell spray polyurethane foam provides both a high R-value per inch and a built-in vapor retarder, making it suitable for cold ductwork where condensation control is a primary concern. Faced fiberglass batts, loose-fill cellulose, and mineral wool blankets with a vapor-permeable facing are not appropriate for the interior of cold ducts because they do not adequately resist moisture penetration and can trap condensation, leading to mold and material degradation.

QUESTION 2 SINGLE CHOICE

Under the 2015 International Energy Conservation Code (IECC), what is the minimum R-value required for ceiling insulation with attic spaces in Climate Zone 2 (residential wood-frame construction)?

A R-30

B R-38

C R-49

D R-60

ANSWER B

WHY The 2015 IECE Table R402.1.1 (or equivalent residential insulation requirements table) specifies R-38 as the minimum ceiling insulation R-value for wood-frame residential construction in Climate Zone 2. R-30 is typical of older or warmer zone minimums, R-49 applies to colder zones (such as Climate Zones 5–8), and R-60 exceeds the minimum prescriptive requirement.

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QUESTION 3 SINGLE CHOICE

If a wall assembly consists of the following layers from exterior to interior: 3/4-inch plywood sheathing (R-1.0), 2x6 cavity with R-19 fiberglass batt (R-19), 1/2-inch gypsum board (R-0.45), and exterior insulated sheathing of R-5 continuous insulation, what is the effective total R-value of the assembly (excluding surface air films)?

A R-24.45

B R-25.45

C R-20.45

D R-19.45

ANSWER B

WHY The total R-value of a layered assembly is calculated by summing the R-values of each continuous layer and the cavity insulation: R-5 (exterior continuous insulation) + R-1.0 (plywood sheathing) + R-19 (cavity batt) + R-0.45 (gypsum board) = R-25.45. This simple series addition is appropriate when the cavity insulation spans the full depth of the framing cavity and no thermal bridging correction is being applied at this introductory level.

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QUESTION 4 SINGLE CHOICE

When working with fibrous glass insulation in an enclosed area, what is the primary personal protective equipment (PPE) recommended to reduce skin and respiratory exposure to fibers and dust?

A Surgical mask only

B Loose-fitting cotton coveralls and safety glasses

C Properly fitted NIOSH-approved N95 respirator, long-sleeved clothing, and gloves

D Half-mask respirator with organic vapor cartridges

ANSWER C

WHY OSHA and manufacturer guidance for fibrous glass insulation work recommends a properly fitted NIOSH-approved N95 (or better) particulate respirator to filter airborne fibers and dust, combined with loose-fitting long-sleeved clothing and gloves to minimize skin contact and irritation. A surgical mask does not provide adequate filtration, organic vapor cartridges are intended for chemical vapors (not particulates), and standard cotton coveralls without respiratory protection leave the worker unprotected against inhalation exposure.

QUESTION 5 SINGLE CHOICE

In a cold climate, where should a vapor retarder (Class I or II) be installed on the interior side of a wall assembly to control moisture diffusion?

A On the exterior side of the exterior sheathing

B On the warm-in-winter (interior) side of the insulation

C Embedded within the middle of the cavity insulation

D Vapor retarders are not required in cold climates

ANSWER B

WHY In cold climates, the interior side of the building enclosure is the warm-in-winter side. Warm, moist indoor air diffuses outward through the wall assembly, and if it reaches a condensing surface within the wall, moisture can accumulate. A vapor retarder placed on the warm (interior) side of the insulation slows this diffusion and prevents moisture from reaching the dew point within the assembly. Placing the retarder on the cold (exterior) side in a cold climate is incorrect because it can trap moisture inside the wall cavity.

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QUESTION 6 SINGLE CHOICE

For a chilled water supply pipe operating at 40°F in a humid ambient environment, what is the primary purpose of installing exterior jacketing over the pipe insulation?

A To increase the R-value of the insulation

B To provide a vapor retarder and protect the insulation from moisture and physical damage

C To serve as the primary thermal insulation material

D To act as a fireproofing membrane only

ANSWER B

WHY Exterior jacketing (such as PVC, aluminum, or stainless steel) over chilled water pipe insulation serves primarily as a vapor retarder to prevent ambient moisture from migrating into the insulation and condensing on the cold pipe surface. It also protects the insulation from physical damage, UV degradation, and weather exposure. The jacketing itself contributes minimal R-value and is not a substitute for the thermal insulation; fire protection, while a secondary benefit of some jacketings, is not its primary function on chilled water piping.

QUESTION 7 SINGLE CHOICE

Under the 2015 International Energy Conservation Code (IECC), residential duct insulation in unconditioned attics must be sealed and insulated to a minimum of what R-value?

A R-4.2

B R-6

C R-8

D R-12

ANSWER C

WHY The 2015 IECE requires that ducts located in unconditioned spaces (such as attics) be insulated to a minimum of R-8. R-4.2 applies to ducts within conditioned space, R-6 may appear in older code editions or specific climate zone requirements, and R-12 exceeds the prescriptive minimum and would be considered over-insulation for code compliance purposes.

QUESTION 8 SINGLE CHOICE

Which insulation material is manufactured from recycled paper products and treated with fire-retardant chemicals, and is commonly installed by pneumatic (blown) application in attic floors?

A Fiberglass

B Mineral wool

C Cellulose

D Extruded polystyrene (XPS)

ANSWER C

WHY Cellulose insulation is manufactured primarily from recycled newsprint and other paper products and is chemically treated with fire retardants such as borates to improve its fire performance. It is frequently installed by pneumatic blowing into open attic floors, dense-packing into wall cavities, or as a spray-applied wet product. Fiberglass and mineral wool are made from glass or rock fibers, and extruded polystyrene (XPS) is a rigid foam plastic insulation; none of these are made from recycled paper.

QUESTION 9 MULTIPLE CHOICE

Which of the following insulation materials are classified as rigid foam board insulation? (Choose two.)

A Extruded polystyrene (XPS)

B Expanded polystyrene (EPS)

C Fiberglass batt

D Mineral wool loose-fill

ANSWER A · B

WHY Extruded polystyrene (XPS) and expanded polystyrene (EPS) are both classified as rigid foam board insulation products, typically manufactured in flat board form and used in walls, roofs, foundations, and continuous insulation applications. Fiberglass batt and mineral wool loose-fill are not rigid foam boards; they are fibrous insulation products supplied as flexible batts or as loose-fill material that conforms to the cavity being filled.