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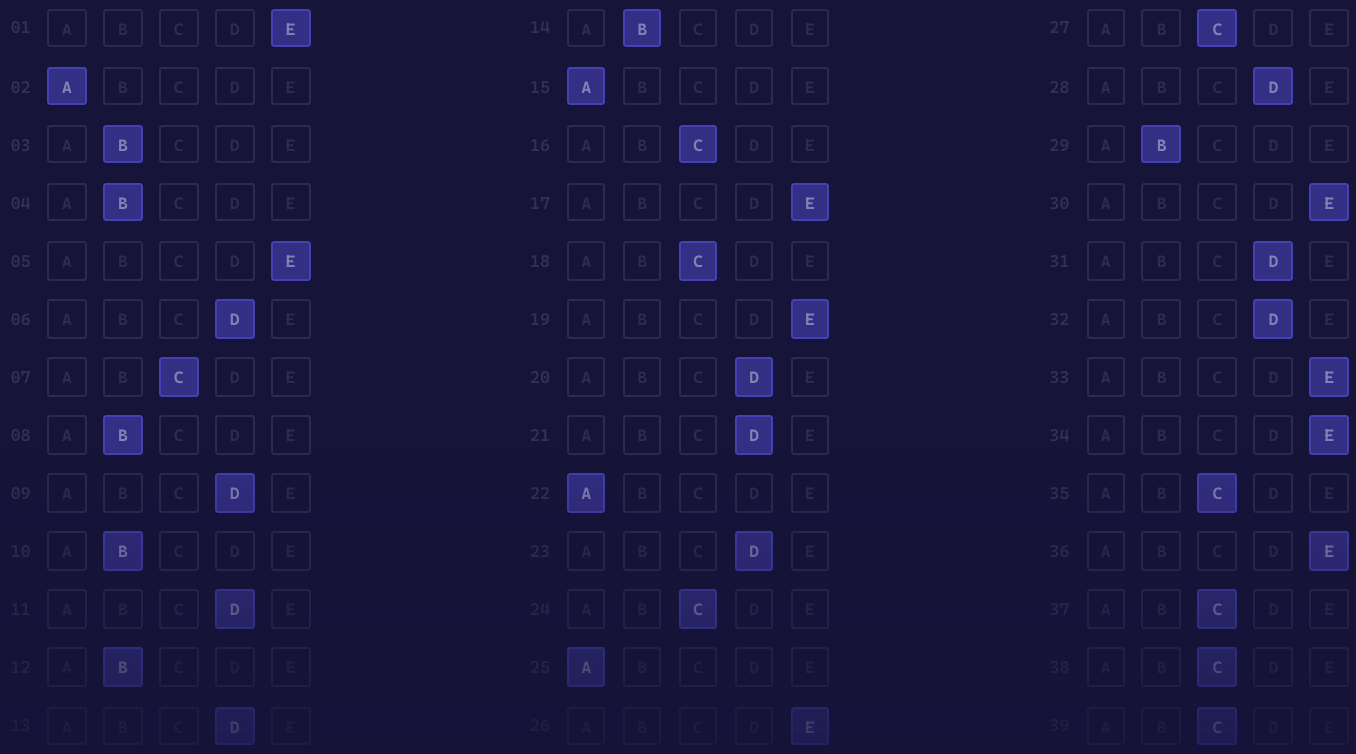

PRACTICE QUESTIONS

ALABAMA CONSTRUCTION

HRX6UNTF

AL Drainage, Irrigation, and Flood Control Contractor

EDITION	QUESTIONS	FORMAT
Demo	9	Limited Edition PDF

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Before you begin

What this is

9 practice questions for ALABAMA CONSTRUCTION `HRX6UNTF`, 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, `HRX6UNTF`
- 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 MULTIPLE CHOICE

When installing a corrugated polyethylene (CPP) drainage pipe for a subsurface agricultural drain, which two installation practices are required by typical manufacturer and industry standards? (Choose two.)

A **Place the pipe on a prepared, smooth trench bottom free of sharp rocks or debris**

B **Use a filter sock or appropriate graded envelope/aggregate around the pipe to limit fines migration**

C Backfill the pipe with native clay directly from the trench wall without compaction

D Install the pipe with the perforations facing downward to capture surface runoff

ANSWER **A · B**

WHY A proper bedding of smooth, stable material (A) prevents point loading and pipe deflection, and a filter sock or graded envelope (B) limits fine sediment that would otherwise clog perforations and reduce the drain's service life. Backfilling with native clay (C) prevents drainage and can damage the pipe, and perforated pipe is installed with the holes facing downward in only specific designs; the standard practice for subsurface drains is holes up so water enters as the table rises. Correct: A and B.

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QUESTION 2 MULTIPLE CHOICE

A contractor is designing a new landscape irrigation system using spray heads on a single lateral. Which two factors must be matched to ensure uniform precipitation and proper zone operation? (Choose two.)

A **Spray head precipitation rate matched to the soil infiltration rate to prevent runoff**

B **All heads on a zone operating at the same pressure and flow classification (matched precipitation)**

C Using the largest possible valve box regardless of valve count to simplify installation

D Pipe diameters selected so that velocity stays within standard limits (typically 5 ft/s) to limit water hammer and friction loss

ANSWER **A · B**

WHY Matched precipitation (B) requires that heads in a zone share the same flow/pressure classification so each applies water at the same rate, and precipitation must be compatible with the soil's intake rate (A) to avoid runoff and dry spots. Valve box sizing (C) is a function of the number and size of valves, not a design objective, and pipe sizing (D) is a valid hydraulic concern but is not one of the two precipitation/uniformity matching requirements the question targets. Correct: A and B.

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QUESTION 3 SINGLE CHOICE

During site grading for a residential development, a contractor notes that a finished slope is steeper than the soil's natural angle of repose and shows signs of surface rilling after rain. Which practice most directly addresses the immediate erosion concern while staying compliant with typical sediment and erosion control practice?

A Installing silt fence along the property line only

B **Re-establishing vegetation, applying erosion control blankets/matting, and regrading to a stable slope where feasible**

C Paving the entire slope with asphalt to stop erosion

D Leaving the slope bare and waiting for it to stabilize naturally

ANSWER **B**

WHY Effective erosion control combines re-vegetation (the most durable long-term control), erosion control blankets/matting to protect the slope while vegetation establishes, and regrading to a stable angle where possible. Silt fence (A) is for perimeter sediment capture, not slope stabilization; paving (C) is not a typical erosion-control measure and changes stormwater runoff characteristics; leaving the slope bare (D) is the worst option and violates the intent of erosion and sediment control. Correct: B.

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QUESTION 4 SINGLE CHOICE

Before commencing work in a designated floodway or stream channel in Alabama, what must the contractor typically obtain?

A A standard business license only

B **An Alabama Department of Environmental Management (ADEM) or U.S. Army Corps of Engineers permit, as applicable, for work in waters of the state/United States**

C A driver's license verification for each equipment operator

D A federal income tax filing extension

ANSWER **B**

WHY Working in a floodway, stream channel, or wetland typically requires state (ADEM) and/or federal (USACE Section 404) authorization, depending on the scope. A general business license (A) does not authorize in-stream work; operator documentation (C) and tax matters (D) are unrelated to floodway permitting. Correct: B.

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QUESTION 5 SINGLE CHOICE

A culvert is being replaced at a driveway crossing on a roadside ditch. To maintain the original drainage pattern and minimize the chance of debris blockage, the replacement culvert should be sized and installed with which consideration?

A **Installed at the same grade and slope as the original, with diameter sized for the design storm using accepted hydrologic/hydraulic methods**

B Installed with a sharp upstream bend to slow water entering the pipe

C Installed flat with no slope to allow sediment to settle inside

D Installed at a smaller diameter than the original to increase velocity and scour the channel

ANSWER **A**

WHY Replacing a culvert in-kind requires matching grade and slope so flow patterns in the ditch remain consistent, and sizing to the design storm using accepted methods (rational method, Manning's equation, etc.) to ensure adequate capacity. A sharp bend (B) causes head loss and blockage; flat installation (C) causes sediment accumulation and ponding; an undersized culvert (D) causes backwater and overtopping. Correct: A.

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QUESTION 6 SINGLE CHOICE

Catch basins and storm drain inlets are commonly constructed with a sump in the bottom of the structure. What is the primary purpose of the sump?

A To store stormwater for irrigation reuse

B To allow sediment and debris to settle out below the invert of the outlet pipe, reducing downstream clogging

C To provide a place for standing water to support mosquito habitat

D To act as a structural footing for the grate frame

ANSWER B

WHY The sump is a depressed area below the outlet pipe invert that allows sediment, leaves, and other debris to settle out of the flow before water leaves the structure, which protects downstream pipes from clogging. It is not an irrigation reservoir (A), is intentionally designed against creating habitat (C), and is not a structural footing (D) — that role is played by the base slab and walls. Correct: B.

QUESTION 7 SINGLE CHOICE

When constructing a small earthen levee, what is the most important material and compaction requirement to reduce the risk of seepage and failure?

A Use select low-permeability clay or similar cohesive material and compact in lifts to the specified density and moisture content

B Use clean, uniformly graded sand placed loose in one thick lift

C Use topsoil with organic content placed and lightly tracked

D Use riprap alone, with no engineered fill core

ANSWER A

WHY An earthen levee relies on a low-permeability, cohesive core built up in controlled lifts and compacted to a specified density at appropriate moisture to minimize seepage, piping, and settlement. Loose sand (B), organic topsoil (C), and riprap without an engineered core (D) do not provide the seepage resistance and structural integrity an earthen levee requires. Correct: A.

QUESTION 8 SINGLE CHOICE

A contractor is sizing the backflow prevention device for a landscape irrigation system connected to a potable water supply. Which statement is correct?

A **A reduced-pressure zone (RPZ) or pressure vacuum breaker assembly is typically required on irrigation systems to protect the potable supply from contamination**

B No backflow prevention is required if the irrigation lines are buried below 18 inches

C A single check valve on the sprinkler head is sufficient

D Backflow prevention is only needed for systems using reclaimed water

ANSWER **A**

WHY Irrigation systems connected to potable water must include an approved backflow prevention assembly (commonly RPZ or pressure vacuum breaker, depending on local code) to prevent contamination of the public water supply. Burying the pipe (B) does not address cross-connection hazards; a single check at a head (C) is not an approved cross-connection control; and backflow prevention is required for any irrigation system tied to potable water, not only reclaimed water systems (D). Correct: A.

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QUESTION 9 SINGLE CHOICE

Which Best Management Practice (BMP) is most appropriate to stabilize a concentrated flow channel on a disturbed slope until permanent vegetation is established?

A **An erosion control blanket or turf reinforcement mat installed per manufacturer recommendations and staked in place**

B Laying bare straw loosely on top of the channel with no anchoring

C Removing all existing topsoil from the channel and leaving it compacted smooth

D Installing a perimeter silt fence across the channel invert

ANSWER **A**

WHY Erosion control blankets or turf reinforcement mats are specifically designed to stabilize concentrated flow channels and slopes while vegetation establishes, and must be installed and staked per the manufacturer's guidelines. Loose unanchored straw (B) is quickly washed off; removing topsoil and smoothing (C) eliminates the seedbed and accelerates runoff; a silt fence placed in the channel (D) will be overtopped and act as a debris dam rather than a channel liner. Correct: A.

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