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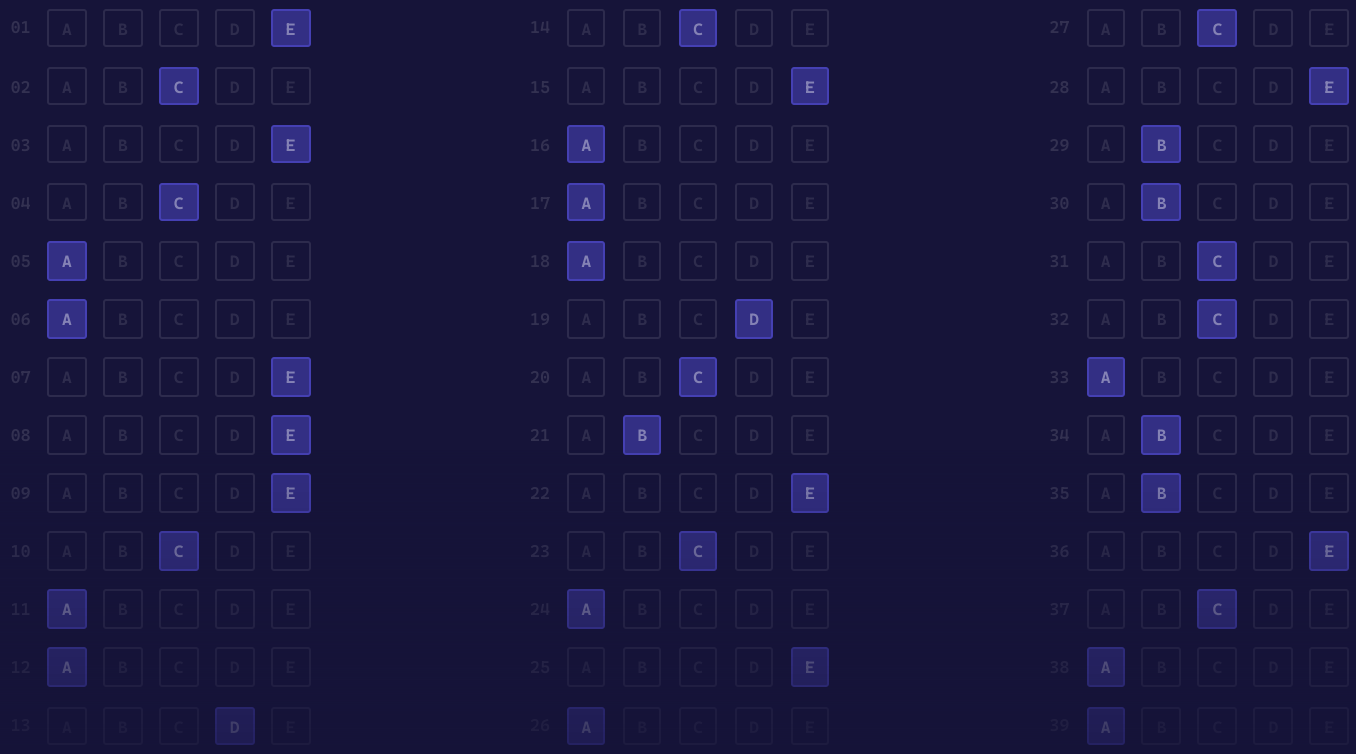

PRACTICE QUESTIONS

ALABAMA CONSTRUCTION

Z97SEKYJ

AL Drainage and Culvert 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 `Z97SEKYJ`, 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, `Z97SEKYJ`
- 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 installing corrugated metal pipe (CMP) culverts in Alabama roadway projects, which of the following requirements apply? (Choose two.)

A **Bedding material must be placed to ensure uniform support along the pipe barrel**

B The pipe invert must be elevated above the natural streambed by at least 12 inches

C **Backfill must be placed in lifts and compacted to prevent pipe deformation**

D All joints must be welded with continuous fillet welds on both sides

ANSWER **A · C**

WHY Proper bedding ensures uniform support and prevents point loads that can damage the pipe (A). Backfill placed in compacted lifts prevents deformation and provides structural support (C). Inverts are typically placed at or below streambed grade, not elevated 12 inches (B is wrong). Welded joints are not standard for CMP culvert installations — they use coupling bands (D is wrong).

QUESTION 2 MULTIPLE CHOICE

A drainage contractor is installing a culvert on a state highway project in Alabama after a rain event has exposed erodible soils. Which erosion control measures are typically required at the inlet and outlet? (Choose two.)

A **Riprap or other energy dissipators at the outlet to prevent scour**

B Concrete headwalls with wingwalls at the inlet

C Sediment basins upstream of the inlet

D **Permanent vegetation or geotextile stabilization of disturbed areas**

ANSWER **A · D**

WHY Energy dissipators such as riprap are standard at culvert outlets to prevent scour and downstream erosion (A). Permanent stabilization of disturbed areas is required to control erosion over time (D). While concrete headwalls are common, they are not strictly required everywhere (B is not always required). Sediment basins are typically upstream of the entire site, not at individual culvert inlets (C is wrong context).

QUESTION 3 SINGLE CHOICE

When sizing a culvert for a roadway crossing in Alabama, the primary hydraulic factor that determines the required culvert cross-sectional area is the:

A **Design discharge (Q) of the watershed**

B Length of the culvert barrel

C Type of pipe material used

D Depth of cover over the pipe

ANSWER A

WHY The design discharge (Q), typically determined from a hydrologic analysis of the contributing watershed for a selected design storm (e.g., 10-year, 25-year), drives the required culvert size. Barrel length, material, and cover depth are design constraints that follow the size selection.

QUESTION 4 SINGLE CHOICE

For excavations deeper than 5 feet made for culvert installation, OSHA requires that the contractor:

A Use a registered professional engineer to design all excavations

B **Provide a protective system such as sloping, benching, shoring, or a trench box unless the excavation is in stable rock**

C Backfill the trench before any worker enters it

D Obtain written approval from the local building inspector

ANSWER B

WHY 29 CFR 1926.652 requires protective systems (sloping, benching, shoring, or trench boxes) for excavations deeper than 5 feet, except when entirely in stable rock. A registered engineer is only required when the excavation is over 20 feet deep (A is wrong). Backfilling before entry is not the standard procedure (C is wrong). Local inspector approval is not a substitute for OSHA-required protective systems (D is wrong).

QUESTION 5 SINGLE CHOICE

The primary purpose of providing proper bedding material beneath a flexible culvert pipe is to:

A Increase the hydraulic capacity of the pipe

B Ensure uniform support along the length of the pipe and prevent concentration of loads

C Prevent corrosion of the pipe material

D Reduce the depth of cover required over the pipe

ANSWER B

WHY Bedding distributes the load uniformly along the pipe barrel and haunches, preventing point loads that can cause cracking, deflection, or failure of flexible pipes. It does not materially affect hydraulic capacity (A), corrosion (C), or cover requirements (D).

QUESTION 6 SINGLE CHOICE

In Alabama, NPDES permitting for construction site stormwater discharges is required when disturbance equals or exceeds:

A One acre

B Five acres

C Ten acres

D Any disturbance, regardless of size

ANSWER A

WHY Under the federal NPDES program as administered by ADEM in Alabama, construction activities disturbing one or more acres (including smaller sites part of a larger common plan) require permit coverage and a SWPPP. The threshold is one acre, not five or ten.

QUESTION 7 SINGLE CHOICE

A concrete headwall with wingwalls is typically constructed at a culvert inlet primarily to:

A **Improve the hydraulic efficiency of the inlet and prevent erosion around the pipe ends**

B Reduce the required pipe diameter

C Eliminate the need for riprap at the outlet

D Allow the pipe to be installed without bedding

ANSWER **A**

WHY Headwalls and wingwalls retain the embankment around the culvert ends, prevent piping failure along the pipe exterior, and improve inlet hydraulics by reducing the entrance loss coefficient. They do not affect pipe diameter (B), eliminate riprap (C), or replace bedding (D).

QUESTION 8 SINGLE CHOICE

On a drainage plan, the symbol 'D' or 'IE' shown at the end of a culvert line most commonly indicates:

A **The diameter of the pipe in inches**

B The direction of flow

C The type of pipe material

D The inlet or ditch elevation

ANSWER **A**

WHY On drainage and utility plans, 'D' or 'IE' typically denotes the pipe diameter in inches. Flow direction is usually shown by an arrow, material by abbreviations such as 'RCP' or 'CMP', and elevations are labeled with explicit values.

QUESTION 9 SINGLE CHOICE

For a culvert installation in Alabama where the water has a low pH (acidic) and moderate sulfate content, which pipe material generally offers the best long-term durability?

A Aluminized corrugated steel pipe

B Reinforced concrete pipe (RCP)

C Corrugated aluminum pipe

D Plain galvanized steel pipe

ANSWER B

WHY Reinforced concrete pipe (RCP) is generally resistant to acidic water and sulfates, especially when proper mix design and sulfate-resistant cement are used. Plain galvanized steel and aluminum are subject to corrosion in acidic conditions; aluminized steel is better but still less resistant than concrete in aggressive environments.