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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

BM5NAM5

AZ R-2 Excavating, Grading and Oil Surfacing

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for ARIZONA REGISTRAR OF CONTRACTORS **BMY5NAM5**, 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, **BMY5NAM5**
- the question number
- the email address on your order

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

QUESTION 1

MULTIPLE CHOICE

An excavator is preparing a trench that will be 9 feet deep with vertical walls in Type B soil. According to OSHA 29 CFR 1926 Subpart P requirements, which of the following protective measures must be in place before workers may enter the trench? (Choose two.)

- ☒ **A** A timber shoring system, hydraulic shoring system, or equivalent protective system designed for the soil type and depth
- ☒ **B** A fixed ladder, ramp, or other means of egress installed so that no worker must travel more than 25 feet to exit the trench
- ☐ **C** A registered professional engineer's stamp affixed to every page of the protective system design drawings
- ☐ **D** Removal of all spoil piles within 2 feet of the trench edge regardless of the protective system used
- ☐ **E** Mandatory use of supplied-air respirators for all workers entering the trench regardless of atmospheric readings

ANSWER A - B

WHY For a 9-foot excavation in Type B soil, OSHA 29 CFR 1926.652 requires a protective system (shoring, sloping, or a trench box) appropriate for the depth and soil class. 1926.651(c)(2) also requires a means of egress such as a ladder or ramp placed so that lateral travel does not exceed 25 feet. Spoil pile setback, PE stamping, and respirator use are not universally required by these specific rules.

QUESTION 2

MULTIPLE CHOICE

Under Arizona Revised Statutes and Blue Stake (Arizona 811) requirements, which of the following actions are required of an excavator before breaking ground on a public or private excavation project? (Choose two.)

- ☐ **A** Provide the positive response confirmation code received from each notified utility member to the inspector or owner upon request
- ☒ **B** Notify Arizona 811 at least two working days before excavation begins for routine (non-emergency) work
- ☒ **C** Hand-dig (pot-hole) to verify the exact depth and location of any marked utility line before mechanized equipment crosses or excavates near it
- ☐ **D** Pay a per-ticket surcharge to each individual utility company that responds with a locate request
- ☐ **E** Forward a copy of every locate ticket to the Arizona Registrar of Contractors before any work begins

ANSWER B - C

WHY Arizona law (A.R.S. § 40-360.21 et seq. and the 811 rules) requires excavators to provide at least two working days' notice (excluding the day of the call) before excavation and to hand-dig to verify marked utility locations within the tolerance zone before using mechanical equipment. Positive response codes are documented but not the basis for the pre-excavation notice itself; per-ticket surcharges and Registrar forwarding are not statutory requirements.

QUESTION 3

SINGLE CHOICE

Under OSHA 29 CFR 1926.652, the maximum allowable slope for a 20-foot-deep excavation in Type C soil (the most unstable OSHA soil class) when no shoring is provided is:

- ☐ A 1/2 : 1 (horizontal to vertical)
- ☐ B 3/4 : 1 (horizontal to vertical)
- ☐ C 1 : 1 (horizontal to vertical)
- ☒ D 1-1/2 : 1 (horizontal to vertical)

ANSWER D

WHY Per OSHA Appendix B to Subpart P, Type C soil has a maximum allowable slope of 1-1/2 horizontal to 1 vertical (approximately 34 degrees). The slopes for Type A and Type B soils are 3/4:1 and 1:1 respectively, so D is the correct, stable value for Type C.

QUESTION 4

SINGLE CHOICE

A contractor is told the finish floor elevation of a building pad must be 100.00 feet and the existing ground at the stake reads 97.40 feet. The amount of fill required at that stake is:

- ☐ A 2.60 feet of cut
- ☒ B 2.60 feet of fill
- ☐ C 97.40 feet of fill
- ☐ D 100.00 feet of fill

ANSWER B

WHY Fill is required when the existing elevation is below the proposed (finish) elevation. $100.00 - 97.40 = 2.60$ feet of fill. A cut would be required if the existing ground were higher than the proposed grade.

QUESTION 5

SINGLE CHOICE

Under Maricopa County and ADEQ rules commonly applied to grading sites, which BMP (Best Management Practice) is required to prevent sediment from leaving a construction site via storm water runoff?

- ☒ **A** Installing a stabilized construction entrance/exit and perimeter silt fencing or wattles
- ☐ **B** Painting the disturbed soil with white latex to reduce visible dust
- ☐ **C** Pumping wash water directly into the nearest storm drain
- ☐ **D** Removing all vegetation from the entire site prior to grading

ANSWER A

WHY Stabilized construction entrances and perimeter sediment controls (silt fence, wattles, berms) are standard, required BMPs in Arizona's AZPDES Construction General Permit and local dust-control ordinances. White-painting soil, discharging wash water to storm drains, and clearing all vegetation are not compliant practices.

QUESTION 6

SINGLE CHOICE

When operating a hydraulic excavator on a grading job, which practice is required by OSHA and standard industry safety rules?

- ☐ **A** Workers may stand in the swing radius of the upper structure as long as they make eye contact with the operator
- ☒ **B** The bucket, sticks, or other attachments must be lowered to the ground with the controls in neutral and the engine shut off before the operator dismounts
- ☐ **C** Seat belts may be omitted on machines equipped with ROPS if the cab has an enclosed cab
- ☐ **D** Riders are permitted on the machine when transporting it short distances between work areas

ANSWER B

WHY OSHA 1926.602(a)(3)(i) requires that when the operator dismounts, the machine be shut down with controls in neutral and all hydraulic-powered implements lowered to the ground or otherwise stabilized. Workers are prohibited from being in the swing radius (1926.602(a)(2)), seat belts are required with ROPS, and riders are prohibited.

QUESTION 7

SINGLE CHOICE

A road is being given an asphaltic oil surface treatment (chip seal). Immediately after the emulsified asphalt is sprayed, the operation that must follow before traffic is allowed on the new surface is:

- ☐ A Compacting the bare oil surface with a steel-wheel roller and leaving it to cure for 24 hours before chipping
- ☒ B Spreading and rolling cover aggregate (chips) into the fresh oil film before the emulsion breaks and cures
- ☐ C Spraying a second application of the same emulsion over the first coat without aggregate
- ☐ D Allowing the oil to fully cure, then opening to traffic before any aggregate is placed

ANSWER B

WHY A chip seal is a surface treatment in which cover aggregate is spread and rolled into the fresh emulsified asphalt binder while it is still wet/tacky so the chips embed and adhere. Curing before placing aggregate would leave an unprotected, slick oil film and is not a correct chip-seal procedure.

QUESTION 8

SINGLE CHOICE

An Arizona contractor's R-2 license classification covers which scope of work?

- ☐ A General building construction of any structure
- ☒ B Excavating, grading and oil surfacing of land, roads and irrigation ditches
- ☐ C Electrical wiring of buildings and related facilities
- ☐ D Plumbing and gas-fitting installations within buildings

ANSWER B

WHY The R-2 classification as defined by the Arizona Registrar of Contractors covers excavating, grading and oil surfacing of land, roads and irrigation ditches — the scope named by the exam title. The other options describe the B (general), C-11 (electrical), and C-37 (plumbing) classifications.

QUESTION 9

SINGLE CHOICE

In a Proctor compaction test, the maximum dry density of a soil is achieved at a specific moisture content known as the:

- ☐ A Liquid limit
- ☐ B Plastic limit
- ☒ C Optimum moisture content
- ☐ D Shrinkage limit

ANSWER C

WHY The Proctor test identifies the optimum moisture content at which a soil reaches its maximum dry density under a specified compaction effort. The liquid, plastic, and shrinkage limits are Atterberg limits describing soil plasticity behavior, not compaction behavior.