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38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

ARIZONA REGISTRAR OF CONTRACTORS

AAGYZKNR

AZ CR-67 Low Voltage Communication Systems
(Residential/Commercial)

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

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

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

QUESTION 1

SINGLE CHOICE

Per the National Electrical Code, low-voltage Class 2 communication cables run parallel to a 120V branch circuit in a commercial tenant space. What is the minimum separation required when the conductors are placed in separate raceways and the length of parallel run exceeds 50 feet?

- ☐ A No separation is required if both cables are rated CL2
- ☒ B At least 2 inches (50 mm)
- ☐ C At least 6 inches (150 mm)
- ☐ D At least 12 inches (300 mm)

ANSWER B

WHY NEC 725.136(A) requires a minimum separation of 2 inches (50 mm) between Class 2/3 circuits and power conductors when run in parallel and the parallel run exceeds 50 feet, unless a listed divider or approved barrier is used. 6 and 12 inches are not the minimum stated in the NEC for this scenario.

QUESTION 2

SINGLE CHOICE

Which cable type is most appropriate for distributing both telephone and data service to each residential outlet location according to the TIA-570 residential telecommunications cabling standard?

- ☐ A RG-6 coaxial cable
- ☒ B 4-pair unshielded twisted-pair (UTP), Category 6 or better
- ☐ C Single-pair shielded audio cable
- ☐ D Multi-mode fiber only

ANSWER B

WHY TIA-570 (Residential Telecommunications Infrastructure) specifies 4-pair UTP, Category 6 (or better) as the primary twisted-pair media for telephone and data service at each outlet. Coaxial cable is used for video distribution, fiber is optional/advanced, and single-pair audio cable is not the standard distribution medium.

QUESTION 3

SINGLE CHOICE

In Arizona, which license classification authorizes a contractor to install, alter, or repair low-voltage communication systems, including telephone, data, and video distribution systems, in both residential and commercial settings?

- ☐ A R-7 (Roofing)
- ☐ B C-7 (Low Voltage Communication Systems)
- ☒ C CR-67 (Low Voltage Communication Systems)
- ☐ D K-77 (Plumbing)

ANSWER C

WHY The CR-67 classification is the Arizona Registrar of Contractors license specifically authorizing work on low-voltage communication systems. The C-7 is a similar/western-states classification used in some jurisdictions but in Arizona the appropriate classification for this exam code is CR-67. R-7 covers roofing and K-77 covers plumbing, neither being relevant.

QUESTION 4

SINGLE CHOICE

A contractor is mounting a low-voltage data/voice patch panel and active equipment inside a telecommunications room. What is the minimum working space requirement in front of the equipment per the National Electrical Code when the equipment is not likely to be worked on while energized?

- ☐ A No working space is required because the equipment operates at less than 50V
- ☐ B At least 30 inches (762 mm) of clear depth and 30 inches (762 mm) of width
- ☒ C At least 36 inches (914 mm) of clear depth and 30 inches (762 mm) of width, with headroom of 6.5 ft
- ☐ D At least 48 inches (1.2 m) in all directions

ANSWER C

WHY NEC 110.26 working space requirements apply to equipment likely to be worked on while energized regardless of low-voltage status. The standard requires a minimum depth of 36 inches, a minimum width of 30 inches (or the width of the equipment, whichever is greater), and a minimum headroom of 6.5 feet. Low-voltage operation does not exempt equipment from these access and working-space requirements.

QUESTION 5

SINGLE CHOICE

Where low-voltage communication cables penetrate a fire-rated wall or floor assembly, which of the following is required by the National Electrical Code?

- ☒ **A** Penetrations of fire-rated assemblies must be firestopped using a listed through-penetration firestop system installed in accordance with the listing
- ☐ **B** Firestopping is optional if the cables are PVC-jacketed
- ☐ **C** Only the visible side of the penetration must be sealed with duct tape
- ☐ **D** Cable bundles must be filled with expanding foam, regardless of the listing

ANSWER A

WHY NEC 300.21 and 725.3 require that penetrations of fire-rated walls, floors, and ceilings be sealed with a listed through-penetration firestop system installed per the manufacturer's listing and a recognized tested system. Cables cannot simply be foamed, taped, or sealed in an unlisted manner, and there is no PVC-jacketed exemption.

QUESTION 6

SINGLE CHOICE

A contractor must run a communication cable through a commercial air-handling (plenum) space. Which NEC cable listing marking must be used?

- ☐ **A** CM (general-purpose communications cable)
- ☐ **B** CMR (riser-rated communications cable)
- ☒ **C** CMP (plenum-rated communications cable)
- ☐ **D** CMX (cable for residential/limited use)

ANSWER C

WHY Per NEC 800, cables installed in plenum (air-handling) spaces must be listed as CMP, which has low-smoke, fire-resistant insulation rated for that environment. CMR is rated for risers but not plenums, CM is for general use, and CMX is limited to residential and other restricted applications.

QUESTION 7 SINGLE CHOICE

Per NEC Article 800, the primary protector grounding conductor for a communications system must be sized based on which factor?

- ☐ A The length of the communications run from the demarcation point to the equipment
- ☒ B The size of the largest ungrounded power conductor in the building, or 14 AWG copper minimum
- ☐ C The number of telephone pairs being protected
- ☐ D A fixed 6 AWG regardless of system size

ANSWER B

WHY NEC 800.100 requires the primary protector grounding conductor to be sized per Table 800.100(A), which is based on the size of the largest ungrounded power conductor or, where no power conductor is present, a minimum 14 AWG copper conductor. It is not arbitrarily fixed at 6 AWG and is not based on the length of the communications run.

QUESTION 8 SINGLE CHOICE

A technician is replacing a battery-backed UPS module that supplies -48 VDC to a telecommunications equipment rack. Which statement best reflects safe work practice?

- ☐ A Because the voltage is below 50 V, no lockout/tagout or PPE is required
- ☒ B Even though -48 VDC is considered low voltage, the UPS must be de-energized, locked out, and verified dead before service, because of stored energy and arc-flash hazards
- ☐ C The batteries can be left connected provided a rubber mat is used
- ☐ D Only the AC input to the UPS must be disconnected; the DC bus can remain energized

ANSWER B

WHY Although -48 VDC is low-voltage, telecommunications battery systems store substantial energy and can produce dangerous arcs and burns. OSHA and industry standards require de-energization, lockout/tagout, and verification before servicing, with appropriate PPE. Leaving the DC bus energized while disconnecting only the AC supply is unsafe because the batteries remain in the circuit.

QUESTION 9

MULTIPLE CHOICE

A CR-67 contractor must select the appropriate listed communications cable type for each location in a small commercial building. Match each installation location with the correct NEC cable marking. (Choose two correct pairings.)

- ☐ **A** Horizontal run in the office ceiling, not in a plenum: CMP
- ☒ **B** Vertical run between floors in a shaft: CMR
- ☐ **C** Cables run inside an air-handling plenum: CMX
- ☒ **D** Residential single-family dwelling, one- and two-family use: CMX

ANSWER B - D

WHY Per NEC 800.179, CMR (Communications Riser) is the proper listing for cables run vertically between floors in a riser shaft, and CMX (Communications Limited Use) is the residential listing appropriate for one- and two-family dwellings. CMP is plenum-rated and would be required (not optional) for plenum spaces; CMX is not permitted in commercial plenum spaces. Therefore pairings B and D are correct.