



**CEDIA CERTIFIED
CABLING & INFRASTRUCTURE TECHNICIAN (CIT)
EXAM BLUEPRINT**

		# of Items	% of Exam
DOMAIN 1 PROJECT PROCESSES		25	21%
1.1	Safety		
1.2	Jobsite Professionalism		
1.3	Project Documentation		
DOMAIN 2: FUNDAMENTALS OF ELECTRICITY AND MATHEMATICS		10	8%
2.1	Electrical Basics		
2.2	Industry Related Math		
DOMAIN 3: TOOLS		12	10%
3.1	Hand Tools		
3.2	Power Tools		
3.3	Testing Tools		
DOMAIN 4: CONSTRUCTION METHODS & MATERIALS		12	10%
4.1	Codes and Regulations		
4.2	Construction Materials		
4.3	Retrofit Considerations		
DOMAIN 5: INFRASTRUCTURE		33	28%
5.1	Cable and Wiring		
5.2	Labeling		
5.3	Fasteners and Fixings		
5.4	Installation Practices (Pre-Wire, First Fix)		
5.5	Terminations (Trim, Second Fix)		
DOMAIN 6: EQUIPMENT & HARDWARE		28	23%
6.1	Mounting & Installation		
6.2	Audio Devices		
6.3	Video Devices		
6.4	Security Devices		
6.5	Basic Control Devices		
6.6	Other Sub-Systems		
Total Items on Exam		120	100%

DOMAIN 1 PROJECT PROCESSES	Knowledge & Skills	
Subdomain 1.1: Safety	1	Knowledge of foundational personal safety and accident prevention concepts and equipment both on and off a job site (e.g., electricity, ladders, burns, slips/trips/falls, hazardous materials, job organization/cleanliness [i.e., good housekeeping])
Subdomain 1.1: Safety	2	Knowledge of foundational property protection concepts and equipment (both on and off a job site)
Subdomain 1.1: Safety	3	Knowledge of safety symbols and protocols (e.g., material data sheets)
Subdomain 1.1: Safety	4	Knowledge of basic first aid treatments and procedures for minor incidents
Subdomain 1.1: Safety	5	Knowledge of the importance of company safety policies, including typical safety meetings
Subdomain 1.1: Safety	6	Knowledge of emergency procedures for major incidents
Subdomain 1.1: Safety	7	Skill in the care and use of personal protective equipment (PPE)
Subdomain 1.1: Safety	8	Knowledge of motor vehicle safety and accident prevention (e.g., properly mounting ladders on a vehicle, proper van loading techniques to protect people and equipment)
Subdomain 1.1: Safety	9	Skill in recognizing potential safety risks and taking proactive appropriate action(s) to mitigate the risks (e.g., personal safety, heavy equipment [personal lifts] safety)
Subdomain 1.2: Jobsite Professionalism	10	Knowledge of workplace/jobsite etiquette and professionalism (e.g., respecting privacy and confidentiality, being considerate to others on-site, professional appearance, verbal communication skills)
Subdomain 1.2: Jobsite Professionalism	11	Knowledge of CEDIA Certification Code of Conduct
Subdomain 1.2: Jobsite Professionalism	12	Knowledge of internal communication reporting structure and best practices (including team member communication best practices)
Subdomain 1.3: Project Documentation	13	Skill in reading construction drawings (e.g., floor plan, reflected ceiling plan, elevation drawings) in order to complete pre-wire
Subdomain 1.3: Project Documentation	14	Knowledge of common industry drawing symbols (e.g., speaker, keypad, camera, outlet)
Subdomain 1.3: Project Documentation	15	Skill to read and follow a cable schedule
Subdomain 1.3: Project Documentation	16	Skill to understand the work to be performed in a work order and the scope of work of the job
Subdomain 1.3: Project Documentation	17	Knowledge of what a change order is and when it is needed
Subdomain 1.3: Project Documentation	18	Knowledge that incomplete items on the scope of work must be documented (e.g., punch list, to do list) and the associated reporting requirements

Subdomain 1.3: Project Documentation	19	Knowledge of the types of information found in installation and instruction manuals and their importance
Subdomain 1.3: Project Documentation	20	Knowledge of roles, responsibilities, and accountabilities of project stakeholders (e.g., clients, project manager, architects, interior designers, builders, other trades)
Subdomain 1.3: Project Documentation	21	Skill to understand third party service provider requirements and restrictions (e.g., Telco, CATV, ISP, SAT, Terrestrial TV)

DOMAIN 2: FUNDAMENTALS OF ELECTRICITY AND MATHEMATICS

Knowledge & Skills

Subdomain 2.1: Electrical Basics	22	Knowledge of the definitions of and difference between alternating current and direct current (including the symbols representing them)
Subdomain 2.1: Electrical Basics	23	Knowledge of the definition of circuits (series and parallel) and how to connect these two types of circuits.
Subdomain 2.1: Electrical Basics	24	Knowledge of the four basic units of measurement used with electricity (watts, amperes, volts, ohms) and how they relate with one another in Ohm's Law
Subdomain 2.1: Electrical Basics	25	Knowledge of electrical safety basics (e.g., identifying symbols, understanding grounding and circuit interrupters, using electricity at job site)
Subdomain 2.2: Industry-Related Math	26	Skill to perform basic arithmetic (e.g., applied to cable laying, equipment height)
Subdomain 2.2: Industry-Related Math	27	Skill to perform mathematical conversions (e.g., fraction/decimal and metric/imperial)
Subdomain 2.2: Industry-Related Math	28	Skill to read, convert and understand scale on industry drawings
Subdomain 2.2: Industry-Related Math	29	Skill in measuring angles (e.g., wiring for surround sound speakers)

DOMAIN 3: TOOLS

Knowledge & Skills

Subdomain 3.1: Hand Tools	30	Knowledge of proper use, storage, and maintenance of the following hand tools: cable cutters, cable strippers insulation displacement (IDC) punch down tool, compression tool, 8P8C (RJ45) modular plug crimp tool, pliers (lineman, needle-nose), screwdrivers, allen keys, cutting templates, work surfaces, hex-nut drivers, drywall/jab/pad saw, staple gun, utility knife, scissors, flush cutters, level, fish tape, fish rods and connectors, tape measure, chalk line, industrial marking tools, step ladders, extension ladders, and scaffold
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Subdomain 3.1: Hand Tools	31	Skill to identify the following hand tools: cable cutters, cable strippers insulation displacement (IDC) punch down tool, compression tool, 8P8C (RJ45) modular plug crimp tool, pliers (lineman, needle-nose), screwdrivers, allen keys, cutting templates, work surfaces, hex-nut drivers, drywall/jab/pad saw, staple gun, utility knife, scissors, flush cutters, level, fish tape, fish rods and connectors, tape measure, chalk line, industrial marking tools, step ladders, extension ladders, and scaffold
Subdomain 3.2: Power Tools	32	Knowledge of proper use, storage, and maintenance of the following power tools: corded and cordless (battery powered) drills, drill bits, impact drills, corded and cordless saws, reciprocating saw, jigsaw, circular saw, grinders, router, powder-actuated tool [nail gun], soldering iron, label maker, laser level, rotary tool, oscillating tool (multi-tool), and vacuum
Subdomain 3.2: Power Tools	33	Skill to identify the following power tools: corded and cordless (battery powered) drills, drill bits, impact drills, corded and cordless saws, reciprocating saw, jigsaw, circular saw, grinders, router, powder-actuated tool [nail gun], soldering iron, label maker, laser level, rotary tool, oscillating tool (multi-tool), and vacuum
Subdomain 3.3: Testing Tools	34	Knowledge of common types of test equipment, including stud finder, tone generator and inductive noise amplifier, telephone test set, multimeter, basic data cable tester, and network cable tester
Subdomain 3.3: Testing Tools	35	Skill to use common types of test equipment, including stud finder, tone generator and inductive noise amplifier (probe), telephone test set, multimeter, basic data cable tester, and network cable tester

DOMAIN 4: CONSTRUCTION METHODS & MATERIALS		
		Knowledge & Skills
Subdomain 4.1: Codes and Regulations	36	Knowledge of differences between codes/regulations, standards, and recommended practices
Subdomain 4.1: Codes and Regulations	37	Knowledge of applicable minimum requirements for maintaining structural integrity when installing cabling in various construction materials
Subdomain 4.1: Codes and Regulations	38	Knowledge of the activities that can be performed by the technician versus those that require an electrician (e.g., low-voltage and line voltage)
Subdomain 4.2: Construction Materials	39	Skill to identify construction methods and common construction materials (new construction), including wood stud, metal stud, concrete brick construction, plaster, dot and dab, service entries, and eco-friendly construction
Subdomain 4.2: Construction Materials	40	Knowledge of structural concerns that need to be communicated to appropriate stakeholders (e.g., team member, supervisor, project manager)
Subdomain 4.2: Construction Materials	41	Knowledge of common retrofit techniques for various types of construction, including the structural impacts of cutting and drilling
Subdomain 4.2: Construction Materials	42	Knowledge of reasons why supervision is needed for retrofit projects

Subdomain 4.2: Construction Materials	43	Skill to install cable/wire using surface mounted techniques for a retrofit project
Subdomain 4.2: Construction Materials	44	Skill to install cable/wire using cable concealment techniques during a retrofit with approval and supervision

DOMAIN 5: Knowledge & Skills		
INFRASTRUCTURE		
Subdomain 5.1: Cable and Wiring	45	Skill to identify cable/wire types and properties (including cable construction, multi-conductor cable, twisted-pair cable, coaxial cable, fiber optic cable, bundled cable, direct burial cable), cable applications, manufacturer and industry ratings/certifications, and signal types
Subdomain 5.1: Cable and Wiring	46	Knowledge of cable/wire types, topologies, and applications, including local standards and regulations (e.g., heat and smoke)
Subdomain 5.1: Cable and Wiring	47	Knowledge of commonly used color code standards for telephony, speakers (audio), data, and video (e.g., correct pair combinations for cables; color codes for speaker cables)
Subdomain 5.2: Labeling	48	Knowledge of common cable labeling best practices (e.g., legible, in location that will not be painted over, label both ends)
Subdomain 5.2: Labeling	49	Knowledge of the common types of labels for labeling cables and equipment
Subdomain 5.3: Fasteners and Fixings	50	Skill to identify appropriate fasteners/fixings, anchors, and back boxes used to mount cable and other equipment to structures, including cable fasteners, cable trays and raceways, threaded fasteners, mechanical fasteners, epoxy anchoring system, and outlet plates, hardware, and modular jack systems
Subdomain 5.3: Fasteners and Fixings	51	Skill to identify appropriate methods and fasteners/fixings for securing or attaching cabling/wiring to various types of materials
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	52	Skill to install proper wire/cable for a specific purpose and specific conditions (e.g., weather, outdoor vs. indoor)
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	53	Knowledge of techniques for safely pulling cables and cable properties (e.g., bend radius, tension, friction, handling)
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	54	Skill to install back boxes for a specific purpose
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	55	Knowledge of methods of protecting cables (e.g., rubber grommets, nailing plates)
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	56	Knowledge of device installation techniques (“Pre-wire/First Fix”) and appropriate methods of securing cabling (according to local authority having jurisdiction)
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	57	Knowledge of fire-rated back boxes and other special circumstance devices and provisions
Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	58	Knowledge of third party service provider installation location requirements (e.g., physical locations for telco/CATV/ISP/SAT, demarcation point)

Subdomain 5.4: Installation Practices (Pre-Wire, First Fix)	59	Knowledge of physical space conflicts with other trades (e.g., manifolds, alarm panels, ventilation, pipe-blocking location)
Subdomain 5.5: Terminations (Trim, Second Fix)	60	Knowledge of termination methods and plate-work (e.g., how many cables can be terminated in a specific type of socket, plate type and size, two versus four modules)
Subdomain 5.5: Terminations (Trim, Second Fix)	61	Skill to perform basic continuity testing of installed cabling/wiring
Subdomain 5.5: Terminations (Trim, Second Fix)	62	Skill to identify termination types, pin-out configuration, wire preparation and termination techniques, and connection points on cables and equipment, including modular plugs and jacks (e.g., 8P8C [RJ45], 6P4C [RJ-11], 6P6C [RJ-25]), RJ-31X, F-connector, BNC, RCA, phone plugs (standard, mini, and sub-mini [TS, TRS, & TRRS]), terminals (forked, ring, or spade tongue), speaker connectors (banana plugs and binding posts), Euroblock (phoenix) connectors, HDMI, XLR, crimp connectors (jelly crimps, beanies, beans, dolphins), insulation displacement connectors (110 blocks, modular jacks, 66 blocks, krone blocks), fiber optic connectors (SC, ST, LC, and MT-RJ), etc.
Subdomain 5.5: Terminations (Trim, Second Fix)	63	Skill to properly terminate common general purpose and communications cables using compression, insulation displacement, and crimp style connectors
Subdomain 5.5: Terminations (Trim, Second Fix)	64	Knowledge of when to use solder-style terminations

DOMAIN 6: EQUIPMENT & HARDWARE		Knowledge & Skills
Subdomain 6.1: Mounting & Installation	65	Knowledge of common mounting hardware and fasteners (e.g., brackets, lags, toggle bolts, drywall/plaster-board anchors, rings, back-boxes)
Subdomain 6.1: Mounting & Installation	66	Knowledge of proper installation techniques for common types of equipment (e.g., mounting surface is appropriate for the application)
Subdomain 6.1: Mounting & Installation	67	Knowledge of measurement tools and techniques for mounting equipment
Subdomain 6.1: Mounting & Installation	68	Knowledge of flown/suspended/hanging device requirements (e.g., TV/projector lifts and screens), especially related to safety
Subdomain 6.1: Mounting & Installation	69	Knowledge of types of camera mounting brackets, housings, and their uses
Subdomain 6.1: Mounting & Installation	70	Knowledge of mounting techniques for security system devices (e.g., motion sensor, door contact, shock sensor)
Subdomain 6.1: Mounting & Installation	71	Knowledge of types of display mounting brackets and their uses
Subdomain 6.2: Audio Devices	72	Skill in identifying common audio devices and components (e.g., receiver, amplifier, speaker types)
Subdomain 6.2: Audio Devices	73	Skill in basic installation of audio-related devices (e.g., keypads, volume controls, architectural speakers)
Subdomain 6.3: Video Devices	74	Skill to identify common video devices

Subdomain 6.3: Video Devices	75	Knowledge of basic installation techniques for video devices
Subdomain 6.4: Security Devices	76	Skill to identify basic video monitoring devices (e.g., security cameras, video doorbells, baby monitors)
Subdomain 6.4: Security Devices	77	Skill to identify security system devices (e.g., motion sensor, door contact, shock sensor)
Subdomain 6.5: Basic Control Devices	78	Skill to identify common control devices (e.g., relays, sensors)
Subdomain 6.5: Basic Control Devices	79	Skill to identify common user interface devices (e.g., remote, keypad, touch screens, voice controllers, specialist controllers)
Subdomain 6.5: Basic Control Devices	80	Skill to identify common lighting control components (e.g., keypad, switch, dimmer, accessory switch/dimmer, sensor)
Subdomain 6.6: Other Sub-Systems	81	Skill to identify energy monitoring and management devices
Subdomain 6.6: Other Sub-Systems	82	Skill to identify non-arming sensing devices (e.g., pressure, light, acceleration) and how they interface with the system
Subdomain 6.6: Other Sub-Systems	83	Knowledge of motorized devices (e.g., shades, lifts, mounts)
Subdomain 6.6: Other Sub-Systems	84	Knowledge of safety considerations when working with motorized devices (e.g., shades, lifts, mounts)
Subdomain 6.6: Other Sub-Systems	85	Skill to identify common network devices (e.g., router, switch, access point)
Subdomain 6.6: Other Sub-Systems	86	Skill to identify common IoT/DIY devices
Subdomain 6.6: Other Sub-Systems	87	Knowledge of potential applications or integrations of commonly installed sub systems (e.g., lighting/shades, HVAC systems, security systems)
Subdomain 6.6: Other Sub-Systems	88	Skill to identify components of commonly installed sub systems