

CalHR Test Item/KSAPC Linkage Sheet Electrician I

Examination Section #1

Electrician Knowledge			
	CalHR's Job Analysis KSAPC Statement		Department's Job Analysis KSAPC Statement
1.	Knowledge of the principles and methods (e.g., sequences of installations, coordination with other trades, conduit bending, wire pulling, rating of equipment) used in the installation, maintenance, and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, high voltage, switchboards, motor control centers) to accomplish work assignments.	1.	
2.	Knowledge of the rules and regulations (e.g., National Electric Code, NFPA (70E), Electrical Safety Orders of the Division of Industrial Safety, California Code of Regulations) to safely complete work assignments and provide direction/information.	2.	
3.	Knowledge of electrical code books and manuals (e.g., National Electric Code (NEC), local jurisdictions) for the installation, maintenance, alteration and repair of electrical systems and components.	3.	
4.	Knowledge of the principles and operations of electrical equipment (e.g., wiring, switches, lighting, transformers, switchboards, motor control centers) for the installation, maintenance, alteration and repair of electrical systems and components.	4.	

Examination Section #2

Electrician Tools			
	CalHR's Job Analysis KSAPC Statement		Department's Job Analysis KSAPC Statement
1.	Knowledge of materials, tools, and equipment (e.g., cable reels, conduit benders, stripping tools, voltage or current meters, wire or cable cutters) used in the installation, maintenance, and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, high voltage, switchboard, motor control centers) to accomplish work assignments.	1.	
2.	Knowledge of Personal Protective Equipment (PPE) to safely complete work assignments and provide direction/information.	2.	

Examination Section #3

Mathematics			
	CalHR's Job Analysis KSAPC Statement		Department's Job Analysis KSAPC Statement
1.	Knowledge of basic mathematical operations and calculations (e.g., addition, subtraction, multiplication, division, percentages, order of operations) to calculate labor, materials, and/or cost estimates for projects and work orders, etc.	1.	
2.	Ability to perform basic mathematical computations (e.g., addition, subtraction, multiplication, division, ratios, percentages) to calculate labor, materials, and/or cost estimates for projects, work orders and additions, etc.	2.	

Mathematics			
	CalHR's Job Analysis KSAPC Statement		Department's Job Analysis KSAPC Statement
3.	Ability to determine the accuracy of various mathematical calculations (e.g., addition, subtraction, multiplication, division, ratios, percentages) to verify labor, materials, and/or cost estimates for projects, work orders and additions, etc.	3.	
4.	Knowledge of algebraic formulas to perform electrical calculations (e.g., derating factors, load calculations).	4.	
5.	Ability to apply algebraic formulas to perform electrical calculations (e.g., derating factors, load calculations).	5.	