

Certification: Electrical Plans Examiner



Exam ID: E3

- 70 multiple-choice questions
- 3-1/2-hour limit
- Open book

Scope:

The Electrical Plans Examiner is responsible for reviewing plans, drawings, and specifications to determine code compliance for electrical installations or alterations of electrical systems indoors and outdoors including services, conductors, equipment, components, fixtures, appliances, devices, and electrical appurtenances for all types of buildings and structures (residential, commercial, and industrial) with no limit as to voltage or amperage. The Electrical Plans Examiner is also responsible for verification of load calculations and fault current calculations.

01	General Administration	2%
0101	<u>Public Information</u> Provide general information on code provisions and communicate using proper code definitions and terminology with co-workers and with individuals who submit plans.	2%
02	Services	24%
0201	<u>Service Size, Rating</u> Determine code compliance of service equipment including the riser diagram, the location, number of disconnects, feeders, clearances, location, and materials.	8%
0202	<u>Service Grounding and Bonding</u> Determine code compliance of the service grounding and grounding electrode system including the size, type of conductors, location, and electrodes.	7%
0203	<u>Load Calculations</u> Determine code compliance of the size of service conductors for single-phase loads, three-phase loads and combination of single- and three-phase loads.	6%
0204	<u>Fault Current Calculations and Current Limiting Characteristics</u> Determine code compliance of the current limiting characteristics of the service equipment and maximum fault current available considering the size and impedance of the system.	3%
03	Branch Circuit and Feeder Requirements	19%
0301	<u>Feeder Calculations</u> Determine code compliance of size of feeder conductors and verify the feeder load calculations.	5%
0302	<u>Branch Circuit Calculations</u> Determine code compliance of branch circuit loads and conductor size.	4%

0303	<u>Branch Circuit Ratings and Overcurrent Protection</u>	5%
	Determine code compliance of size, type, and location of overcurrent devices including overcurrent protection for tap conductors.	
0304	<u>Equipment Grounding and Bonding</u>	5%
	Determine code compliance of size, type, and location requirements for grounding of	
04	Wiring Methods and Distribution Systems	11%
0401	<u>Branch Circuit Requirements</u>	3%
	Determine code compliance of the number of branch circuits, receptacle, lighting, and appliance outlets and verify that GFCI and AFCI protection is provided where required.	
0402	<u>Boxes and Enclosures</u>	2%
	Determine code compliance of boxes and enclosures, verifying they are the proper type, material and correctly sized	
0403	<u>Panelboards and Switchboards</u>	4%
	Determine code compliance of panelboards and switchboards and verify the location, clearances, and rating.	
0404	<u>Raceways, Cables, and Bus Ducts</u>	2%
	Determine code compliance of wiring methods. Verify proper sizing/fill of raceways.	
05	Equipment for General Use	15%
0501	<u>Switches, Receptacles, and Lighting Fixtures</u>	3%
	Determine code compliance of lighting fixtures, type and rating of receptacles, switches, and disconnects.	
0502	<u>HVAC Equipment and Other Appliances</u>	3%
	Determine code compliance of heating and cooling equipment and appliances.	
0503	<u>Motors and Controllers</u>	5%
	Determine code compliance of motors and motor controllers and motor branch circuits. Verify calculations for locked rotor current, short circuit protection for motor branch circuits, and overload protection for motors and disconnects.	
0504	<u>Transformers, Generators, and Miscellaneous Equipment</u>	4%
	Determine code compliance of other general use equipment such as generators and	
06	Special Occupancies	16%
0601	<u>Hazardous Locations</u>	5%
	Determine code compliance of wiring methods, materials, and equipment for use in hazardous locations.	

0602	<u>Health Care Facilities</u>	4%
	Determine code compliance of electrical wiring for health care facilities.	
0603	<u>Miscellaneous Other Special Occupancies</u>	3%
	Determine code compliance of electrical wiring for other special occupancies to verify compliance with special code requirements, including mobile homes and RV parks.	
0604	<u>Commercial Garages and Gas Stations</u>	4%
	Determine code compliance of wiring methods and materials for commercial garages, gas stations, bulk storage plants, and similar hazardous locations.	
07	Special Equipment	7%
0701	<u>Swimming Pools, Fountains, and Similar Installations</u>	4%
	Determine code compliance of wiring methods and equipment for swimming pools, spas, indoor installations of decorative fountains, and similar installations.	
0702	<u>Miscellaneous Special Equipment</u>	3%
	Determine code compliance of wiring and equipment for miscellaneous special equipment, including signs, information technology rooms, and wiring and equipment for fire protection systems, including fire pumps.	
08	Special Equipment	6%
0801	<u>Emergency and Standby Systems</u>	3%
	Determine code compliance of emergency systems, including egress lighting and exit signs.	
0802	<u>Signaling Systems</u>	1%
	Determine code compliance of Class 1, 2, and 3 circuits.	
0803	<u>Fire Alarm Systems</u>	2%
	Determine code compliance of fire alarm system wiring and devices.	