Certification: Commercial Electrical Inspector

Exam ID: E2

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

01   General Requirements   10%

0101   Project Administration and Legal   3%
Verify that required permits are issued and valid. Issue and maintains inspection reports, correction notices, stop work orders, and data for the issuance of the certificate of occupancy. Verify that the required approved plans and specifications are available on the job site. (Some questions may refer to a set of plans for reading fixture schedules, panel schedules, riser diagrams,

0102   Public Information   2%
Communicate the intent of the code using proper terminology. Answer questions about general code compliance, procedures, and materials. Identify the suitability of the installation of materials according to the listing, and labeling.

0103   Conductors   5%
Inspect conductors to verify correct use and installation, type, insulations, markings, and ampacity. Verify that conductor connections, splices, and terminal identification meet code requirements.

02   Services   17%

0201   Service Size, Rating, and Installations   8%
Inspect services to verify, required conductor ampacity, clearances, location, materials, equipment, and provisions for installation.

0202   Service and Feeder Grounding and Bonding   9%
Verify size, type of conductors, and electrodes, including location and installation.

03   Branch Circuit and Feeder Requirements   19%

0301   Branch Circuit and Feeder Installation   5%
Inspect branch circuit and feeder installation to verify conductor size, clearances, location, materials, and equipment grounding conductors.

0302   Branch Circuit and Feeder Calculations   4%
Verify that the load to be placed on branch circuits and feeders meets code provisions for the conductor, devices, materials, and equipment installed.

0303   Branch Circuit Ratings and Overcurrent Protection   5%
Verify correct size, type, location, and installation of overcurrent devices.

| 0304 | Equipment Grounding and Bonding | 5% |

Verify correct size, type, location, and installation requirements for equipment grounding.

04   Wiring Methods and Distribution Systems   **19%**

| 0401 | Branch Circuit Required Outlets | 3% |

Verify that receptacle and lighting outlets and switches are provided in all required locations.
Verify that ground-fault circuit interrupter protection is provided in all required locations.

| 0402 | Boxes, Enclosures, and Conduit Bodies | 5% |

Verify that boxes, enclosures, and conduit bodies are proper type and correctly sized and installed.

| 0403 | Panelboards and Switchboards | 6% |

Verify location, clearances, rating, circuit identification, and overcurrent protection.

| 0404 | Raceways, Cables, and Bus Ducts | 3% |

Inspect conduit raceways, wireways, busways, and cable bus to verify correct use, type, size, support, and installation. Inspect sheathed cable, armored cable, metal-clad cable, to verify correct use, type, support, and installation.

| 0405 | Flexible Cords and Fixture Wires | 2% |

Verify proper use and sizing of flexible cords.

05   General Use Equipment   **12%**

| 0501 | Switches, Receptacles, and Light Fixtures | 3% |

Verify that light fixtures and fixture wires are of correct type and rating, and are properly installed
Verify that switches and receptacles are of the correct type and rating, and are installed properly.

| 0502 | General Use Equipment and Other Appliances | 3% |

Inspect general use equipment, space heating, and cooling equipment, including air conditioning and refrigeration wiring and equipment, to verify correct type, use, installation, and disconnecting means. Inspect appliance wiring and equipment to verify correct type, use, installation, and disconnecting means.

| 0503 | Motors and Controllers | 3% |

Inspect motors and phase converters to verify correct use, size, voltage, and type, and inspect motor control circuits to verify correct size, motor protection when required, and wiring.

| 0504 | Transformers, Generators, and Miscellaneous Equipment | 3% |

Inspect other general use equipment and wiring, including capacitors, resistors, and batteries, to verify correct type, use, and installation. Inspect generators and transformers to verify correct use, size, type, and installation.

06	**Special Occupancies**	**9%**

0601 <u>Hazardous Locations</u>   3%
Inspect materials and equipment required specifically for use in hazardous locations to verify suitability for the intended use, and verify that work is correctly installed and sealed.

0602 <u>Health Care Facilities</u>   2%
Inspect electrical installations in health care facilities to verify compliance with special code requirements.

0603 <u>Miscellaneous Other Special Occupancies</u>   1%
Inspect the electrical installations of other special occupancies to verify compliance with special code requirements.

0604 <u>Commercial Garages, Gas Stations, and Bulk Stations</u>   3%
Verify correct type of wring methods and materials for commercial garages, gas stations, and bulk stations, and similar hazardous locations.

07	**Special Equipment**	**7%**

0701 <u>Swimming Pools, Fountains, and Similar Installations</u>   4%
Inspect electric wiring and equipment installed for swimming pools, spas, indoor installations of decorative fountains, and similar installations to verify correct type, use, bonding, and installation of electrical materials.

0702 <u>Miscellaneous Special Equipment</u>   3%
Inspect electric wiring and equipment for miscellaneous special equipment to verify correct type, use, and installation. Verify correct wiring for computer and data equipment. Inspect electric wiring and equipment installed for electric signs to verify correct type, use, and installation.

08	**Special Systems**	**7%**

0801 <u>Emergency Systems</u>   2%
Inspect emergency system wiring, including legally required and optional standby systems.

0802 <u>Signaling Systems</u>   2%
Inspect low voltage control wiring, Class 1, 2, and 3 circuits; and fire protective signaling circuits.

0803 <u>Fire Alarm Systems</u>   2%
Inspect fire alarm systems for correct use, wire size, type, installation, and operation. Verify correct location, number, and wiring of fire alarm system devices.

0804 <u>Communications Systems</u>   1%
Verify proper type and location of wire installed for communication circuits, including CATV and fiber optics. Verify proper clearances and grounding of conductors for communications systems.