

US1702

Demonstrate knowledge of, and apply electrical legislation, New Zealand Codes of Practice, and Standards

Part 1

Electricity safety regulation

The Electricity (Safety) Regulations 2010

Part	Title	Section number range	Important section numbers
Part 1			
Part 2			
Part 3			
Part 4			
Part 5			
Part 5A			
Part 6			
Part 7			
Part 8			
Part 9			
Sched 1			
Sched 2			
Sched 3			
Sched 4			
Sched 5			
Sched 6			
Sched 7			
Sched 8			

1. A domestic installation that has been disconnected for 10 months can be reconnected to the supply providing the person doing the reconnection signs a certificate issued in accordance with AS/NZS 3019. Refer to the Electricity (Safety) regulations 2010 and state TWO aspects relating to the certificate issued in accordance with AS/NZ 3019.

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2. An electrical installation operates at standard low voltage. Refer to the Electricity (Safety) Regulations 2010 and state where in the installation the first MEN switchboard must be installed.

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3. Socket outlets that comply with AS/NZS 3112 must be supplied at standard low voltage. Refer to the Electricity (Safety) Regulations 2010 and state the TWO other requirements that apply to 3-pin flat pin socket outlets that comply with AS/NZS 3112.

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4. Refer to the Electricity (Safety) Regulations 2010 and state the TWO requirements for the supply of electricity to an electrical installation that operates at a voltage other than standard low voltage.

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5. Refer to the Electricity (Safety) Regulations 2010 and state the circumstances where an RCD installed as part of an installation for the protection of property is deemed to be electrically unsafe.

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6. A caravan is required to have a current warrant of electrical fitness before connection to a power supply. Refer to the Electricity (Safety) Regulations 2010 and state ONE situation where a person must ensure that a caravan has a current warrant of electrical fitness.

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7. Refer to the Electricity (Safety) Regulations 2010 and state **THREE** circumstances where a **RCD installed as part of an installation or a portable RCD is deemed to be electrically unsafe.**

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8. Introduction

An electrician has carried out additions and alterations on the fixed wiring of a 230V, single-phase electrical installation. The work has included:

- One new lighting final subcircuit – 1.5 mm² twin and earth TPS
- Three new socket outlet final subcircuits– 2.5 mm² twin and earth TPS
- Extending two socket outlet subcircuits - 2.5 mm² twin and earth TPS
- A new sub-main circuit to a garage – 4 mm² twin and earth TPS
- New mains from the existing MEN switchboard to a new point of supply – 16 mm² twin TPS

Use the information in this introduction to answer the following questions:

- a) Refer to the Electricity (Safety) Regulations 2010 and state the Standard that details the testing that the electrician is required to carry out on the work.

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b) Refer to the Electricity (Safety) Regulations 2010 and state FOUR general safety requirements the electrician must ensure relating to the work carried out.

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c) The electrician is required to complete a certificate of compliance within 3 days of the work being completed. Refer to the Electricity (Safety) Regulations 2010 and state TWO technical matters that may be confirmed on the certificate of compliance.

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9. Introduction

On a construction-site the foreman has asked you to explain the safest method of protection for Class I and Class II hand-held electrical appliances on a construction site that has damp and outdoor situations. The range of appliances available operate at low voltage and extra-low voltage. Use the information in this introduction to answer the following questions:

- a) Refer to the Electricity (Safety) Regulations 2010 and provide the best advice to the foreman about the SAFEST protective system for handheld electrical appliances used in this situation.

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- b) Assume the option stated in your answer to a) is not practicable. There are other types of safety systems detailed in the regulations that are practical alternatives. Refer to the Electrical (Safety) Regulations 2010 and state FOUR protective systems that can used on a construction site that has damp and outdoor situations that are alternatives to the system stated in a).

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10. Refer to the Electricity (Safety) Regulations 2010 and state the TWO conditions under which a homeowner can extend an existing final subcircuit.

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11. Refer to the Electricity (Safety) Regulations 2010 and state FOUR pieces of information that must be recorded on the certificate of compliance section of the document.

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12. Refer to the Electricity (Safety) Regulations 2010 and explain the difference between low voltage and standard low voltage for a single phase a.c. MEN system.

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13. The regulations specify **safety precautions** that must be used in a low voltage installation to safeguard against unintentional re-livening (or unintended reconnection) after isolation. Refer to the Electricity (Safety) Regulations 2010 and state those TWO **safety precautions**.

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14. If a danger is discovered while certain types of work are being carried out the Secretary has to be notified that an immediate danger to life exists. Refer to the Electricity (Safety) Regulations 2010 and state TWO types of work where this applies.

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15. Refer to the Electricity (Safety) Regulations 2010 and state the TWO requirements for the supply of electricity to an electrical installation that operates at a voltage other than standard low voltage.

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16. Introduction

A 400V, three-phase MEN electrical installation has been designed and installed in accordance with Part 1 of AS/NZS 3000. The installation incorporates equipment that operates at standard low voltage. Use the information in this introduction to answer the following questions:

- a) Refer to the Electricity (Safety) Regulations 2010 and state what the person installing the electrical installation must ensure in relation to the declaration of conformity.

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- b) Refer to the Electricity (Safety) Regulations 2010 and state FOUR items that must be contained in the declaration of conformity.

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17. Refer to the Electricity (Safety) Regulations 2010 and state TWO requirements relating to safety of electricity supplied.

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18. Before connecting new works to a power supply, the person doing the connection must test works before connecting to supply. List 3 items the person testing should ensure:

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19. A person who issues an electrical safety certificate must, on request by any of the following, provide a copy of the certificate to the requester within 10 working days after the request: Refer to the Electricity (Safety) Regulations and list the 6 persons or organisations who may request this information.

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20. Refer to the Electricity (Safety) Regulations 2010 and state what is meant by **low-risk prescribed electrical work**

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