Australian Government

Assessment Requirements for MEM30025 Analyse a simple electrical system circuit

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MEM30025A Analyse a simple electrical system circuit.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- analysing the functions and components of a simple electrical system circuit on at least two occasions
- establishing the function and purpose of selected circuit
- obtaining a simple circuit diagram from existing drawings and documentation
- analysing the circuit for electrical characteristics on at least two occasions.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures
- hazard and control measures associated with analysing the function of a simple electrical system circuit
- dangers and safety precautions
- the function of resistors
- the function of capacitors
- basic electrical physics
- electrical protection methods
- alternating current (AC) circuit
- power supplies:
  - transformers
  - rectifiers
  - smoothing filters
  - voltage regulators and feedback
  - function and operation of a simple low voltage direct current (DC) power supply
  - function and operation of the transformer in a simple low voltage DC power supply, including the significance of the turns ratio

- function in a simple low voltage DC power supply of rectifiers including the significance of the diode characteristics, for both half and full wave types
- operation of smoothing filters in a simple low voltage DC power supply
- operation of simple zener diode type voltage regulators in a simple low voltage DC power supply.
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Assessment Conditions

- Assessors must:
  - have vocational competency in analysing simple electrical system circuits at least to the level being assessed with relevant industry knowledge and experience
  - satisfy the assessor requirements in the Standards for Registered Training Organisations 2015 or its replacement and comply with the National Vocational Education and Training Regulator Act 2011, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated
- environment that reflects realistic operational workplace conditions that cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
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Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2