

	3.3 Written test 3.4 Portfolio of Evidence 3.5 Interview 3.6 Third party report
4. Context of Assessment	Competency may be assessed individually in the actual workplace or through simulated work environment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

PERFORM COMMISSIONING OF ELECTRICAL SYSTEMS

UNIT CODE: ENG/OS/EIT/CR/05/6/A

UNIT DESCRIPTION

This unit covers the competencies required for commissioning of electrical installation Systems. Commissioning includes preparation of schedule, formulation of procedures, notification of system readiness, organizing commissioning team, conducting tests, training of users, and issuing of completion certificate(s).

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
<p>These describe the key outcomes which make up workplace function.</p>	<p>These are assessable statements which specify the required level of performance for each of the elements.</p> <p><i>(Bold and italicised terms are elaborated in the Range)</i></p>
<p>1. Prepare commissioning schedule and handover procedure</p>	<p>1.1 <i>Relevant parties</i> are communicated to in accordance with the contract</p> <p>1.2 Commissioning schedule is prepared in consultation with the responsible parties</p> <p>1.3 Handover documents and tools checklists are prepared</p>

<p>ELEMENT</p> <p>These describe the key outcomes which make up workplace function.</p>	<p>PERFORMANCE CRITERIA</p> <p>These are assessable statements which specify the required level of performance for each of the elements.</p> <p><i>(Bold and italicised terms are elaborated in the Range)</i></p>
<p>2. Formulate commissioning procedures</p>	<p>2.1 Test and commissioning procedures are formulated according to the design and contract</p> <p>2.2 Commissioning procedure is shared with responsible parties according to the communication procedure</p>
<p>3. Notify system readiness</p>	<p>3.1 <i>System readiness</i> notification standard is developed</p> <p>3.2 Responsible parties are notified as per the established procedure</p>
<p>4. Demonstrate system readiness</p>	<p>4.1 System parameters are identified for demonstration</p> <p>4.2 System functioning is demonstrated to the</p> <p>4.3 responsible parties</p> <p>4.4 Parameters of the functioning system are recorded</p>
<p>5. Conduct user training</p>	<p>5.1 System operation manuals, brochures and as-built drawings are availed</p> <p>5.2 Safe operation procedure and functioning of the system is identified</p> <p>5.3 Users are trained on the operation of the system, and routine checks according to the operation manuals</p> <p>5.4 Training report is recorded according to the established procedure</p>
<p>6. Prepare completion documents</p>	<p>6.1 Other responsible regulatory parties are notified</p> <p>6.2 Completion certificate(s) are issued</p> <p>6.3 Other responsible regulatory parties are identified</p> <p>6.4 Handover documents are prepared by the concerned parties</p>

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
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Variable	Range
Relevant parties may include but is not limited to:	<ul style="list-style-type: none"> • Consulting Engineers • Clients • Authorized company representatives • Quantity surveyors •
System readiness may include but is not limited to:	<ul style="list-style-type: none"> • Complete function of the system • Expected System output
Parameters may include but is not limited to:	<ul style="list-style-type: none"> • Light intensity • Sound • Speed • Efficiency • Temperature • Electrical quantities (like Voltage, current and resistance levels) • Expected output
Regulatory parties may include but is not limited to:	<ul style="list-style-type: none"> • County Governments • ERC (Energy Regulatory Commission) • MSK (Music Copyright of Kenya) • NCA (National Construction Authority) • National Environment Management Authority (NEMA) • Communications Authority of Kenya (CAK)

REQUIRED KNOWLEDGE AND UNDERSTANDING

The individual needs to demonstrate knowledge and understanding of:

<ul style="list-style-type: none"> • The manufacturer's warranty requirements relating to inspection and testing activities for the electrical installations and related components. • The manufacturer's warranty requirements relating to inspection and testing activities for the electrical installations and related components. • Legislation and workplace procedures relevant to <ul style="list-style-type: none"> ➤ Health and safety; ➤ The environment (including waste disposal); ➤ Appropriate personal protection equipment (PPE). 	<ul style="list-style-type: none"> • Workplace procedures for <ul style="list-style-type: none"> ➤ Using test tools and instruments ➤ Work place communication; ➤ Time management ➤ Tools and equipment management • The importance of documentation and keeping records • The relationship between time and costs. • Performing tests including <ul style="list-style-type: none"> ➤ Connection of testing equipment ➤ Operation of testing equipment ➤ Recording and interpretation of
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<ul style="list-style-type: none"> • How the system operates • The operating specifications and tolerances for different types of installed systems • The hazards associated with operating the system. • Identification of users to be trained 	<p>test results</p> <ul style="list-style-type: none"> ➤ Making recommendations based on test results ➤ Compiling test report
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FOUNDATION SKILLS

The individual needs to demonstrate the following additional skills:	
<ul style="list-style-type: none"> • Proficient in using test equipment • Time management • Analytical • Faults troubleshooting • Problem solving 	<ul style="list-style-type: none"> • Planning • Decision making • First aid • Report writing

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and understanding and range.

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Applied appropriate safety standards 1.2 Applied appropriate technical standards 1.3 Identified and used appropriate tools and equipment 1.4 Demonstrated good communication and interpersonal skills 1.5 Prepared and kept appropriate records
2. Resource Implications	<p>Resources the same as that of workplace are advised to be applied. Include: Testing equipment and tools, Electrical power and stationery</p> <p>Stationery</p>
3. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 3.1 Observation 3.2 Oral questioning 3.3 Written test 3.4 Portfolio of Evidence 3.5 Interview 3.6 Third party report
4. Context of Assessment	<p>Competency may be assessed individually in the actual workplace or through simulated work environment</p>

5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.
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