



**REPUBLIC OF KENYA**

**NATIONAL OCCUPATIONAL STANDARDS**

**FOR**

**NETWORK SYSTEM TECHNICIAN**

**KNQF LEVEL 5**

**PROGRAMME CODE: 0612454A**

## PERFORM COMPUTER REPAIR AND MAINTENANCE

**UNIT CODE:**0714 451 03A

### UNIT DESCRIPTION:

This unit covers the competencies required for performing computer repair and maintenance. It involves the ability to: perform computer troubleshooting, repair faulty components, Test computer component functionality and perform computer maintenance.

### ELEMENTS AND PERFORMANCE CRITERIA

<b>ELEMENT</b> These describe the key outcomes which make up workplace functions	<b>PERFORMANCE CRITERIA</b> These are assessable statements which specify the required level of performance for each of the elements. <i>(Bold and italicized terms are elaborated in the range)</i>
1. Perform computer troubleshooting	1.1 User data is assessed as per workplace procedures.
	1.2 Computer problems are identified as per the assessed user data.
	1.3 Solution to the problem is determined as per workplace procedure.
2. Repair faulty components.	2.1 <b><i>Computer components</i></b> for replacement are selected as per the workplace procedure.
	2.2 <b><i>Tools for repairing or replacing</i></b> are assembled as per the workplace procedure.
	2.3 <b><i>Safety procedures</i></b> are observed as per workplace procedures.

	2.4 Faulty computer components are repaired or replaced as per the manufacturer's manual.
	2.5 Obsolete or faulty computer components are <i>disposed</i> as per workplace procedures.
3. Test computer component functionality	3.1 Computer is switched on for POST test as per workplace procedure.
	3.2 Computer component test is performed as per workplace procedure.
	3.3 Computer component's functionality report is generated as per workplace procedure.
4 Perform computer maintenance	4.1 Computer maintenance is scheduled as per the workplace procedure.
	4.2 Computer maintenance is performed as per the workplace procedure.
	4.3 Computer maintenance report is generated as per workplace procedure.

## RANGE

Variable	Range
1. Computer components may include but are not limited to:	<ul style="list-style-type: none"> <li>● Input components.</li> <li>● Output components.</li> <li>● Storage components</li> <li>● Processing components</li> <li>● Communication components</li> </ul>

<p>2. Safety procedures may include but are not limited to:</p>	<p>Personal Protective Equipment:</p> <ul style="list-style-type: none"> <li>● Overall/apron/dust coat</li> <li>● Antiglare screens</li> <li>● Dust mask</li> <li>● Gloves</li> <li>● Safety boots</li> <li>● Antistatic equipment</li> <li>● Antistatic wrist strap</li> <li>● Antistatic mat</li> <li>● Antistatic gloves</li> <li>● Ergonomics</li> <li>● First AID kit</li> </ul>
<p>3. Tools for repairing or replacing may include but are not limited to:</p>	<ul style="list-style-type: none"> <li>● Straight-head screwdriver, large and small</li> <li>● Phillips-head screwdriver, large and small</li> <li>● Tweezers or part retriever</li> <li>● Needle-nosed pliers</li> <li>● Wire cutters</li> <li>● Chip extractor</li> <li>● Hex wrench set</li> <li>● Torx screwdriver</li> </ul>
<p>4. Disposed may include but are not limited to:</p>	<ul style="list-style-type: none"> <li>● E- waste</li> <li>● Pollution</li> <li>● Hazards</li> <li>● Disposal methods</li> </ul>

## REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

### **Required knowledge**

The individual needs to demonstrate knowledge of:

- Troubleshooting techniques
- Procedures and techniques for reassembling
- Component testing techniques
- Computer systems and their components
- The manufacturer's warranty requirements relating to activities for the computer and related components.
- Types of Computer/component testing
- Types of Maintenance techniques

### **Required skills**

The individual needs to demonstrate the following skills:

- Communications skills
- Proficient in ICT
- Time management
- Faults troubleshooting
- Problem solving
- Planning
- First aid
- Critical thinking

### **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> <p>1.1 Identified computer problems as per the assessed user data.</p> <p>1.2 Determined solution to the problem as per workplace procedure.</p> <p>1.3 Selected computer components for replacement as per the workplace procedure.</p> <p>1.4 Assembled tools for repairing or replacing as per the workplace procedure.</p> <p>1.5 Repaired or replaced faulty computer components as per the manufacturer's manual.</p> <p>1.6 Performed computer component test as per workplace procedure.</p> <p>1.7 Performed computer maintenance as per the workplace procedure.</p>
2. Resource implications	<p>The following resources should be provided:</p> <p>Appropriately simulated environment where assessment can take place.</p> <p>2.1 Access to relevant work environment</p> <p>2.2 Resources relevant to the proposed activities or tasks.</p>
3. Methods of assessment	<p>Competency may be assessed through:</p> <p>3.1 Practical</p> <p>3.2 Projects</p> <p>3.3 Third Party Reports</p> <p>3.4 Portfolio of evidence</p> <p>3.5 Written tests</p>
4. Context of Assessment	<p>Competency may be assessed in a workplace or in a simulated workplace</p>

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