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MOBILE PHONE TECHNICIAN



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ASSESSMENT PACKAGE
National Vocational Certificate Level 1

Version 1 - November, 2019



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November, 2019
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ASSESSMENT PACKAGES

National Vocational Certificate Level 1

Version 1 - November, 2019

Instructions for Candidate (to be given by the Assessor before Assessment)

Title of Qualification: National Vocational Certificate level 1, In Mobile Phone Technician	CS Code: 071400632	Level: 1	Version: 1 (2019)
Competency Standard Title: Maintain Tools and Equipment	Assessment Date (DD/MM/YY):		

Candidate Details	Name..... Registration/Roll Number.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following tasks within 60 min timeframe:</p> <ol style="list-style-type: none"> 1. Assessment Task 1: Arrange Tools & Equipment 2. Assessment Task 2: Maintain Tool Kit 3. Assessment Task 3: Insulate Tools and Equipment 4. Assessment Task 4: Calibrate measuring instruments 5. Assessment Task 5: Manage Inventory of tools and equipment. <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Task 1: Arrange Tools & Equipment Performance Criteria 1: Identify tools and equipment Performance Criteria 2: Check specifications of measuring Instruments Performance Criteria 3: Collect required tools and equipment from store</p> <p>Task 2: Maintain Tool Kit Performance Criteria 1: Check Physical Condition of Tools & Equipment before use Performance Criteria 2: Clean Tools and equipment after use Performance Criteria 3: Place tools and equipment at appropriate place</p> <p>Task 3: Insulate Tools and Equipment Performance Criteria 1: Check insulation of tools and equipment Performance Criteria 2: Ensure insulation of tools and equipment as per standards</p> <p>Task 4: Calibrate measuring instruments Performance Criteria 1: Check calibration status of the measuring tools Performance Criteria 2: Perform calibration of measuring tools as per standards</p>

Task 5: Manage Inventory of tools and equipment.

Performance Criteria 1: Check number of tools and equipment as per record

Performance Criteria 2: Report for faulty tools and equipment

Performance Criteria 3: Generate demand for defective tools and equipment

Performance Criteria 4: Maintain record of all tools and equipment.

Portfolios required at the time of assessment (if any) for

Performance criteria for the evaluation of portfolio:

Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

071400632 **Maintain Tools and Equipment**

Candidate Details	Name:Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Assessor Name:.....Assessor's code:..... Assessor's Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the candidate on assessment.

Candidate Signature..... Assessor Signature

Assessment Task 1		Arrange Tools & Equipment		
During the practical assessment, candidate demonstrated the following:				
		Yes	No	Remarks
1.	Performance Criteria 1: Identified tools and equipment			
2.	Performance Criteria 2: Checked specifications of measuring Instruments			
3.	Performance Criteria 3: Collected tools and equipment from store			
Competent		Not Yet Competent		

Assessment Task 2		Maintain Tool Kit		
During the practical assessment, candidate demonstrated the following:				
		Yes	No	Remarks
1	Performance Criteria 1: Checked Physical Condition of Tools & Equipment before use			
2	Performance Criteria 2: Cleaned Tools and equipment after use			
3	Performance Criteria 3: Placed tools and equipment at appropriate place			
Competent		Not Yet Competent		

Assessment Task 3		Insulate Tools and Equipment		
During the practical assessment, candidate demonstrated the following:				
		Yes	No	Remarks
1	Performance Criteria 1: Checked insulation of tools and equipment			
2	Performance Criteria 2: Ensured insulation of tools and equipment as per standards			
Competent		Not Yet Competent		

Assessment Task 4		Calibrate measuring instruments		
During the practical assessment, candidate demonstrated the following:				
		Yes	No	Remarks
1	Performance Criteria 1: Checked calibration status of the measuring tools			
2	Performance Criteria 2: Performed calibration of measuring tools as per standards			
Competent		Not Yet Competent		

Assessment Task 5		Manage Inventory of tools and equipment.		
During the practical assessment, candidate demonstrated the following:				
		Yes	No	Remarks
1	Performance Criteria 1: Checked number of tools and equipment as per record			
2	Performance Criteria 2: Reported for faulty tools and equipment			
3	Performance Criteria 3: Generated demand for defective tools and equipment			
4	Performance Criteria 4: Maintained record of all tools and equipment			
Competent		Not Yet Competent		

Portfolio (if any)		Description of portfolio		
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate level 1, In Generator Mechanic	CS Code: 071400632	Level: 1	Version: 1 (2019)
Competency Standard Title: Maintain Tools and Equipment	Assessment Date (DD/MM/YY): --/--/--		

WRITTEN ASSESSMENT

Question	Candidate's answer
1 Describe types of tools and equipment?	
2 Define preventive/ corrective maintenance?	
3 Describe Techniques of preventive/corrective maintenance?	

Question	Candidate's answer
4 Describe Cleaning procedure of Tools and equipment?	
5 Describe Storing techniques of tools in the tools kit?	
6 Describe insulation techniques of tools and equipment?	

Question	Candidate's answer
7 Define calibration of measuring instruments?	
8 Describe Calibration techniques of measuring instruments?	
9 Describe Importance of test results recording?	
10 Describe method of Enlisting of faulty tools?	

Question	Candidate's answer
11 Describe how to Generate Demand for provision/replacement of tools?	
12 Describe Inventory management techniques?	
13 Describe use of emergency equipment?	

Instructions for Candidate (to be given by the Assessor before Assessment)

Title of Qualification: National Vocational Certificate level 1, In Mobile Phone Technician	CS Code: 071400633	Level: 1	Version: 1 (2019)
Competency Standard Title: Measure Basic Electrical & Electronics Units in Series/Parallel Circuits.	Assessment Date (DD/MM/YY):		

Candidate Details	Name..... Registration/Roll Number.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following tasks within 03 Hours timeframe:</p> <ol style="list-style-type: none"> 1. Assessment Task 1: Measure Electrical Current and Resistance 2. Assessment Task 2: Perform Voltage Measurement 3. Assessment Task 3: Calculate Electrical Power 4. Assessment Task 4: Perform capacitance and inductance measurement/Test 5. Assessment Task 5: Perform Low voltage(step-down) transformer test 6. Assessment Task 6: Construct DC regulated power supply circuit <p>And complete:</p> <ol style="list-style-type: none"> 3. Knowledge assessment test (Written or Oral) 4. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Task 1: Measure Electrical Current and Resistance</p> <p>Performance Criteria 1: Arrange tools, material and equipment for measurement of electric current</p> <p>Performance Criteria 2: Construct series arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit</p> <p>Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit</p> <p>Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit</p>

Task 2: Perform Voltage Measurement

Performance Criteria 1: Arrange tools, material and equipment for measurement of Voltage

Performance Criteria 2: Perform measurement of AC Voltage in a series / Parallel circuit

Performance Criteria 3: Perform measurement of DC Voltage in a series / Parallel circuit

Task 3: Calculate Electrical Power

Performance Criteria 1: Calculate Electrical Power for Parallel circuit

Performance Criteria 2: Calculate Electrical Power for series circuit

Task 4: Perform capacitance and inductance measurement/Test

Performance Criteria 1: Arrange tools, material and equipment for measurement of Capacitance / Inductance

Performance Criteria 2: Perform measurement of Capacitance/ Inductance with LCR meter

Performance Criteria 3: Perform Open circuit / Short Circuit test for the Capacitor

Task 5: Perform Low voltage(step-down) transformer test

Performance Criteria 1: Arrange tools, material and equipment for the transformer test

Performance Criteria 2: Perform Open circuit / Short Circuit test for the Low voltage Transformer

Task 6: Construct DC regulated power supply circuit

Performance Criteria 1: Arrange tools, material and equipment required for construction of the Rectifier circuit

Performance Criteria 2: Construct half wave / Full wave rectifier circuits

Performance Criteria 3: Measure Output voltage of rectifier with Oscilloscope.

Performance Criteria 4: Construct 5 volt regulated DC power supply.

Performance Criteria 5: Measure Output voltage of regulated DC power supply with Oscilloscope.

Portfolios required at the time of assessment (if any) for

Performance criteria for the evaluation of portfolio:

Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

071400633 **Measure Basic Electrical & Electronics Units in Series/Parallel Circuits.**

Candidate Details	Name:Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Assessor Name:.....Assessor’s code:..... Assessor’s Signature:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Feedback to the candidate on assessment.

Candidate Signature..... Assessor Signature

Assessment Task 1		Measure Electrical Current and Resistance		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Arranged tools, material and equipment for measurement of electric current			
2.	Performance Criteria 2: Constructed series arrangement of resistances in a closed loop circuit			
3.	Performance Criteria 3: Constructed Parallel arrangement of resistances in a closed loop circuit			
4.	Performance Criteria 4: Performed measurement of Electrical resistance in a series / Parallel circuit			
5.	Performance Criteria 5: Performed measurement of Alternating current in a series / Parallel circuit			
6.	Performance Criteria 6: Performed measurement of Direct Current in a series / Parallel circuit			
Competent		Not Yet Competent		

Assessment Task 2		Perform Voltage Measurement		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arranged tools, material and equipment for measurement of Voltage			
2	Performance Criteria 2: Performed measurement of AC Voltage in a series / Parallel circuit			
3	Performance Criteria 3: Performed measurement of DC Voltage in a series / Parallel circuit			
Competent		Not Yet Competent		

Assessment Task 3		Calculate Electrical Power		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Calculated Electrical Power for Parallel circuit			
2	Performance Criteria 2: Calculated Electrical Power for series circuit			
Competent		Not Yet Competent		

Assessment Task 4		Perform capacitance and inductance measurement/Test		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arranged tools, material and equipment for measurement of Capacitance / Inductance			
2	Performance Criteria 2: Performed measurement of Capacitance/ Inductance with LCR meter			
3	Performance Criteria 3: Performed Open circuit / Short Circuit test for the Capacitor			

Competent	Not Yet Competent
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Assessment Task 5	Perform Low voltage(step-down) transformer test			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arranged tools, material and equipment for the transformer test			
2	Performance Criteria 2: Performed Open circuit / Short Circuit test for the Low voltage Transformer			
Competent		Not Yet Competent		

Assessment Task 6	Construct DC regulated power supply circuit			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arranged tools, material and equipment required for construction of the Rectifier circuit			
2	Performance Criteria 2: Constructed half wave / Full wave rectifier circuits			
3	Performance Criteria 3: Measured Output voltage of rectifier with Oscilloscope.			
4	Performance Criteria 4: Construct ed 5 volt regulated DC power supply.			
5	Performance Criteria 5: Measured Output voltage of regulated DC power supply with Oscilloscope.			
Competent		Not Yet Competent		

Portfolio (if any)	Description of portfolio			
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate level 1, In Generator Mechanic	CS Code: 071400633	Level: 1	Version: 1 (2019)
Competency Standard Title: Measure Basic Electrical & Electronics Units in Series/Parallel Circuits.	Assessment Date (DD/MM/YY): --/--/--		

WRITTEN ASSESSMENT

Question	Candidate's answer
14 Define Resistance and current of electrical/electronic circuits?	
15 Describe construction of parallel and series close loops circuits?	
16 Describe Types of multi-meters?	

Question	Candidate's answer
17 Describe measuring techniques of current and resistance?	
18 Describe Ohm's Law?	
19 Describe AC and DC voltage?	
20 How multi-meter is used for AC and DC voltage measurements?	

Question	Candidate's answer
21 Define Voltage Drop?	
22 Define Electrical Power and Energy?	
23 Describe measuring techniques of electrical power?	
24 Define capacitance and inductance?	

Question	Candidate's answer
25 Describe types of capacitor and inductors?	
26 Describe measuring techniques of capacitance and inductance?	
27 Define transformer?	
28 Describe Types of transformer?	
29 Describe Testing techniques of open/short circuit low voltage(step-down) transformer?	

Question	Candidate's answer
30 Define conductor, semi-conductor and insulator?	
31 Define diode and transistor?	
32 Define rectifier circuit?	
33 Describe types of rectifier circuits?	

Question	Candidate's answer
34 Describe basic functions of Oscilloscope?	
35 Define regulated power supply?	
36 Describe measuring techniques of output voltage of rectifier circuit?	

Portfolios required at the time of assessment (if any) for

Performance criteria for the evaluation of portfolio:

Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	0714E&A05 National Vocational Certificate Level – 1 in Mobile Phone Technician
Purpose of Assessment	Summative Assessment
Assessment Task	In a given situation to construct full wave rectifier as per given circuit diagram in Annexure-A, Maintain Workplace Safety and tools and equipment.

I can

perform

Performance Criteria	Yes	No
1. Arrange components, tools and equipment as per given circuit diagram		
2. verify and test all the components and equipment's as per given specifications		
3. Construct Full wave rectifier circuit according to given specification.		
4. Adopt work place safety and use of PPE, s as per requirement.		
5. Verify all connection as per given circuit diagram.		
6. Connect circuit to power supply.		
7. Measure output current of the circuit.		
8. Measure output voltage of the circuit.		
9. Clean Tools and equipment after use.		
10. Place tools and equipment at appropriate place.		

Candidate's Signature _____ Assessor's Signature _____

Date: _____

Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Feedback to the Candidate

Candidate's Signature _____ Assessor's Signature _____

Each Assessment Task (with performance criteria)				
Assessment Task		Description of assessment task		
		construct full wave rectifier as per given circuit diagram in Annexure-A, Maintain Workplace Safety and tools and equipment.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Arranged components, tools and equipment as per given circuit diagram			
2.	verified and test all the components and equipment's as per given specifications			
3.	Constructed Full wave rectifier circuit according to given specification.			
4.	Adopted work place safety and use of PPEs as per requirement.			
5.	Verified all connection as per given circuit diagram.			
6.	Connected circuit to power supply.			
7.	Measured output current of the circuit.			
8.	Measured output voltage of the circuit.			
9.	Cleaned Tools and equipment after use.			
10	Placed tools and equipment at appropriate place.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	Satisfactory	Not Satisfactory
<p>1. What is a Transformer?</p>		
<p>2 What is the basic function of diode?</p>	Satisfactory	Not Satisfactory
<p>3 What is rectification?</p>	Satisfactory	Not Satisfactory

4	What is the unit of current?	Satisfactory	Not Satisfactory
5	What is Ohm's Law?	Satisfactory	Not Satisfactory
6	What is the function of Capacitor?	Satisfactory	Not Satisfactory

7	What is Semiconductor?	Satisfactory	Not Satisfactory

