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# MOBILE PHONE TECHNICIAN



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**ASSESSMENT PACKAGE**  
National Vocational Certificate Level 3

Version 1 - November, 2019



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**Document Version**

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# MOBILE PHONE TECHNICIAN



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**ASSESSMENT PACKAGE**  
National Vocational Certificate Level 3

Version 1 - November, 2019

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

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	CS Code: 071400638	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Data Section</b>	<b>Assessment Date (DD/MM/YY):</b>		

<b>Candidate Details</b>	Name.....  Registration/Roll Number.....
<b>Guidance for Candidate</b>	<p><b>To meet this standard, you are required to complete the following tasks within 40 min timeframe:</b></p> <ol style="list-style-type: none"> <li>1. <b>Assessment Task 1:</b> Diagnose fault nature</li> <li>2. <b>Assessment Task 2:</b> Check Key Pad Connector</li> <li>3. <b>Assessment Task 3:</b> Check Key Pad IC</li> <li>4. <b>Assessment Task 4:</b> Check SIM Connector</li> <li>5. <b>Assessment Task 5:</b> Check SIM IC</li> <li>6. <b>Assessment Task 6:</b> Check camera</li> <li>7. <b>Assessment Task 7:</b> Check memory Card connector and slot</li> <li>8. <b>Assessment Task 8:</b> Check RAM, ROM and CPU</li> </ol> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>1. <b>Knowledge assessment test (Written or Oral)</b></li> <li>2. <b>Portfolios at the time of assessment (if any)</b></li> </ol>
<b>Minimum Evidence Required</b>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Task 1: Check Key Pad Connector</b> Performance Criteria 1: Check Mobile Phone for Software fault Performance Criteria 2: Check Mobile Phone for hardware fault</p> <p><b>Task 2: Check Key Pad Connector</b> Performance Criteria 1: Check physical condition of key pad connector for damage Performance Criteria 2: Check physical condition of key pad circuit for damage Performance Criteria 3: Check metallic plate tags for discontinuity</p> <p><b>Task 3: Check Key Pad IC</b> Performance Criteria 1: Check physical condition of key pad IC for damage Performance Criteria 2: Check physical condition of key Pad IC prints on PCB for worn out</p> <p><b>Task 4: Check SIM Connector</b> Performance Criteria 1: Check physical condition of SIM connector for damage Performance Criteria 2: Check physical condition of SIM connector on PCB for connectivity</p>

**Task 5: Check SIM IC**

Performance Criteria 1: Check physical condition of SIM IC for damage  
Performance Criteria 2: Check physical condition of PCB SIM connector for connectivity

**Task 6: Check camera**

Performance Criteria 1: Check physical condition of camera for damage  
Performance Criteria 2: Check camera lens and focus for proper function  
Performance Criteria 3: Check Camera Connector for connectivity

**Task 7: Check memory Card connector and slot**

Performance Criteria 1: Check physical condition of memory card slot for damage  
Performance Criteria 2: Check memory card IC for damage

**Task 8: Check RAM, ROM and CPU**

Performance Criteria 1: Check RAM, ROM and CPU-IC for physical damage  
Performance Criteria 2 Check RAM, ROM and CPU-IC pin connections for continuity with PCB

**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.



<b>Assessment Task 1</b>	Diagnose fault nature			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1.	Performance Criteria 1: Check mobile phone for software fault			
2.	Performance Criteria 2: Check Mobile Phone for Hardware fault			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 2</b>	Check Key Pad Connector			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1.	Performance Criteria 1: Checked physical condition of key pad connector for damage			
2.	Performance Criteria 2: Checked physical condition of key pad circuit for damage			
3	Performance Criteria 3: Checked metallic plate tags for discontinuity			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 3</b>	Check Key Pad IC			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked physical condition of key pad IC for damage			
2	Performance Criteria 2: Checked physical condition of key Pad IC prints on PCB for worn out			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 4</b>	Check SIM Connector			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked physical condition of SIM connector for damage			
2	Performance Criteria 2: Checked physical condition of SIM connector on PCB for connectivity			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 5</b>	Check SIM IC			
<b>During the practical assessment, candidate demonstrated the following:</b>		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked physical condition of SIM IC for damage			
2	Performance Criteria 2: Checked physical condition of PCB SIM connector for connectivity			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 6</b>	Check camera		
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked physical condition of camera for damage			
2	Performance Criteria 2: Checked camera lens and focus for proper function			
3	Performance Criteria 3: Checked Camera Connector for connectivity			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 7	Check memory Card connector and slot			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked physical condition of memory card slot for damage			
2	Performance Criteria 2: Checked memory card IC for damage			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 8	Check RAM, ROM and CPU			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked RAM, ROM and CPU-IC for physical damage			
2	Performance Criteria 2: Checked RAM, ROM and CPU-IC pin connections for continuity with PCB			
<b>Competent</b>		<b>Not Yet Competent</b>		

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.			
<b>Competent <input type="checkbox"/></b>		<b>Not Yet Competent <input type="checkbox"/></b>		



<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	CS Code: 071400638	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Data Section</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
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**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

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

**Feedback to the candidate on assessment.**

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Candidate Signature..... Assessor Signature .....

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Generator Mechanic	CS Code: 071400638	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Data Section</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

**WRITTEN ASSESSMENT**

Question	Candidate's answer
1 Describe key-pad, key-pad connector?	
2 Describe procedure for checking connectivity of metallic plate tags?	
3 Describe normal operating condition (heat-up, worm out) for IC and PCB?	

Question	Candidate's answer
4 Describe Types of SIM connector?	
5 Describe SIM connector connectivity with PCB?	
6 Describe Types of SIM connector IC?	
7 Describe procedure of SIM IC connectivity with PCB?	

Question	Candidate's answer
8 Describe Types of camera & camera connectors?	
9 Describe Types of memory card connector?	
10 Describe Types and uses RAM, ROM and CPU?	

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

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	<b>CS Code:</b> 071400639	<b>Level:</b> 3	<b>Version:</b> 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Network Section</b>	<b>Assessment Date (DD/MM/YY):</b>		

<b>Candidate Details</b>	Name.....  Registration/Roll Number.....
<b>Guidance for Candidate</b>	<p><b>To meet this standard, you are required to complete the following tasks within 40 min timeframe:</b></p> <p>9. <b>Assessment Task 1:</b> Check voltage  10. <b>Assessment Task 2:</b> Check Antenna  11. <b>Assessment Task 3:</b> Check Network filters  12. <b>Assessment Task 4:</b> Check Power Amplifier / PFO  13. <b>Assessment Task 5:</b> Check Bluetooth &amp; Wi Fi section</p> <p><b>And complete:</b></p> <p><b>3. Knowledge assessment test (Written or Oral)</b>  <b>4. Portfolios at the time of assessment (if any)</b></p>
<b>Minimum Evidence Required</b>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <ul style="list-style-type: none"> <li>• <b>Task 1: Check voltage</b>  Performance Criteria 1: Check physical condition of network-section components for damage  Performance Criteria 2: Check rated Voltage at network-section with multi-meter</li> <li>• <b>Task 2: Check Antenna</b>  Performance Criteria 1: Check antenna connection for signals  Performance Criteria 2: Check antenna wire for connectivity  Performance Criteria 3: Check antenna IC switch for networking</li> <li>• <b>Task 3: Check Network filters</b>  Performance Criteria 1: Check burn out components of Rx/Tx filters  Performance Criteria 2: Check filter components with LCR meter / Oscilloscope for proper function  Performance Criteria 3: Check Power Frequency Oscillator for network signals</li> <li>• <b>Task 4: Check Power Amplifier / PFO</b>  Performance Criteria 1: Check burn out components at Amplifier section  Performance Criteria 2: Check burn out components of Power Frequency Oscillator (PFO) / Power Amplifier for rated output  Performance Criteria 3: Check Baseband IC for damage  Performance Criteria 4: Check Voltage Controlled Oscillator (VCO) for rated signals</li> </ul>

- **Task 5: Check Bluetooth & Wi Fi section**

Performance Criteria 1: Check Bluetooth and Wi-Fi antenna for signals

Performance Criteria 2: Check Bluetooth and Wi-Fi connectors for continuity

Performance Criteria 3: Check Bluetooth and Wi-Fi circuit section for signals

**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)

071400639 **Diagnose fault in Network Section**

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> <span style="margin-left: 200px;">NOT YET COMPETENT <input type="checkbox"/></span> 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.**

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Candidate Signature..... Assessor Signature .....

Assessment Task 1		Check voltage		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Checked physical condition of network-section components for damage			
2.	Performance Criteria 2: Checked rated Voltage at network-section with multi-meter			
<b>Competent</b>		<b>Not Yet Competent</b>		

  

Assessment Task 2		Check Antenna		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked antenna connection for signals			
2	Performance Criteria 2: Checked antenna wire for connectivity			
3	Performance Criteria 3: Checked antenna IC switch for networking			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 3		Check Network filters		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked burn out components of Rx/Tx filters			
2	Performance Criteria 2: Checked filter components with LCR meter / Oscilloscope for proper function			
3	Performance Criteria 3: Checked Power Frequency Oscillator for network signals			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 4		Check Power Amplifier / PFO		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked burn out components at Amplifier section			
2	Performance Criteria 2: Checked burn out components of Power Frequency Oscillator (PFO) / Power Amplifier for rated output			
3	Performance Criteria 3: Checked Baseband IC for damage			
4	Performance Criteria 4: Checked Voltage Controlled Oscillator (VCO) for rated signals			
<b>Competent</b>		<b>Not Yet Competent</b>		



<b>Assessment Task 5</b>		<b>Check Bluetooth &amp; Wi Fi section</b>		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked Bluetooth and WIFI antenna for signals			
2	Performance Criteria 2: Checked Bluetooth and WIFI connectors for continuity			
3	Performance Criteria 3: Checked Bluetooth and WIFI circuit section for signals			
<b>Competent</b>		<b>Not Yet Competent</b>		

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:		<b>Yes</b>	<b>No</b>	<b>Remarks</b>	
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.				
<b>Competent <input type="checkbox"/></b>		<b>Not Yet Competent <input type="checkbox"/></b>			



<b>Title of Qualification:</b> National Vocational Certificate level 3, In Generator Mechanic	CS Code: 071400639	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Network Section</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

**WRITTEN ASSESSMENT**

Question	Candidate's answer
11 Describe network section components?	
12 Describe voltage and its measuring techniques?	
13 Describe Types and functions of antenna?	

Question	Candidate's answer
14 Describe procedure for checking antenna connectivity?	
15 Describe procedure for checking antenna IC switch for connectivity?	
16 Describe Types and functions of filters, frequency crystals (RF Crystals)?	
17 Techniques for checking of filters with Oscilloscope/LCR meter?	

Question	Candidate's answer
18 Describe Types and functions of amplifier?	
19 Describe function and types of oscillator?	
20 Describe functions of Bluetooth/Wi-Fi?	

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

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	CS Code: 071400641	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Audio Section</b>	<b>Assessment Date (DD/MM/YY):</b>		

<b>Candidate Details</b>	Name.....  Registration/Roll Number.....
<b>Guidance for Candidate</b>	<p><b>To meet this standard, you are required to complete the following tasks within 40 min timeframe:</b></p> <ol style="list-style-type: none"> <li>14. <b>Assessment Task 1:</b> Check Ear Piece</li> <li>15. <b>Assessment Task 2:</b> Check Micro Phone</li> <li>16. <b>Assessment Task 3:</b> Check Speaker (Ringer)</li> <li>17. <b>Assessment Task 4:</b> Check Hands free Section</li> <li>18. <b>Assessment Task 5:</b> Check Vibrator</li> <li>19. <b>Assessment Task 6:</b> Check Audio IC</li> </ol> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li>5. <b>Knowledge assessment test (Written or Oral)</b></li> <li>6. <b>Portfolios at the time of assessment (if any)</b></li> </ol>
<b>Minimum Evidence Required</b>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <ul style="list-style-type: none"> <li>• <b>Task 1: Check Ear Piece</b> Performance Criteria 1: Check dust for blockage Performance Criteria 2: Check Ear piece terminals for continuity Performance Criteria 3: Check Ear piece coil for rated resistance</li> <li>• <b>Task 2: Check Micro Phone</b> Performance Criteria 1: Check dust for blockage Performance Criteria 2: Check Micro Phone terminals for continuity Performance Criteria 3: Check Micro Phone for rated resistance</li> <li>• <b>Task 3: Check Speaker (Ringer)</b> Performance Criteria 1: Check dust for blockage Performance Criteria 2: Check Speaker terminals for continuity Performance Criteria 3: Check Speaker coil for rated resistance</li> <li>• <b>Task 4: Check Hands free Section</b> Performance Criteria 1: Check dust for blockage Performance Criteria 2: Check Hands free terminals for continuity</li> </ul>

- **Task 5: Check Vibrator**

Performance Criteria 1: Check Vibrator connectivity with PCB

Performance Criteria 2: Check Vibrator coil for rated resistance

Performance Criteria 3: Check connectivity between Vibrator and Vibrator IC

- **Task 6: Check Audio IC**

Performance Criteria 1: Check Audio IC for Physical damage

Performance Criteria 2: Check audio-section components for burn out

Performance Criteria 3: Check audio IC points connectivity with PCB

**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)

071400641 **Diagnose fault in Audio Section**

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.**

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Candidate Signature..... Assessor Signature .....



<b>Assessment Task 1</b>	<b>Check Ear Piece</b>			
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1.	Performance Criteria 1: Checked dust for blockage			
2.	Performance Criteria 2: Checked Ear piece terminals for continuity			
3	Performance Criteria 3: Checked Ear piece coil for rated resistance			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 2</b>	<b>Check Micro Phone</b>			
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked dust for blockage			
2	Performance Criteria 2: Checked Micro Phone terminals for continuity			
3	Performance Criteria 3: Checked Micro Phone for rated resistance			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 3</b>	<b>Check Speaker (Ringer)</b>			
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked dust for blockage			
2	Performance Criteria 2: Checked Speaker terminals for continuity			
3	Performance Criteria 3: Checked Speaker coil for rated resistance			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 4</b>	<b>Check Hands free Section</b>			
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked dust for blockage			
2	Performance Criteria 2: Checked Hands free terminals for continuity			

<b>Competent</b>		<b>Not Yet Competent</b>		
<b>Assessment Task 5</b>		<b>Check Vibrator</b>		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked Vibrator connectivity with PCB			
2	Performance Criteria 2: Checked Vibrator coil for rated resistance			
3	Performance Criteria 3: Checked connectivity between Vibrator and Vibrator IC			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 6</b>		<b>Check Audio IC</b>		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance Criteria 1: Checked Audio IC for Physical damage			
2	Performance Criteria 2: Checked audio-section components for burn out			
3	Performance Criteria 3: Checked audio IC points connectivity with PCB			
<b>Competent</b>		<b>Not Yet Competent</b>		

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:		<b>Yes</b>	<b>No</b>	<b>Remarks</b>
1	Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.			
<b>Competent <input type="checkbox"/></b>		<b>Not Yet Competent <input type="checkbox"/></b>		



<b>Title of Qualification:</b> National Vocational Certificate level 3, In Generator Mechanic	CS Code: 071400641	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Diagnose fault in Audio Section</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

**WRITTEN ASSESSMENT**

Question	Candidate's answer
21 Describe Types and functions of earpiece?	
22 Describe cleaning techniques for earpiece	
23 Describe method to find rated resistance of earpiece using multi-meter?	

Question	Candidate's answer
24 How to check continuity of earpiece terminals using multi-meter?	
25 Describe Types and functions of microphone?	
26 Describe method to check continuity of micro phone terminals using multi-meter?	
27 Describe Method to find rated resistance of Micro phone using multi-meter?	

Question	Candidate's answer
28 Describe Types and functions of speaker?	
29 Describe Techniques for speaker Cleaning?	
30 Describe how to check continuity of speaker (Ringer) terminals using multi-meter?	
31 Describe how to find rated resistance of speaker (Ringer) coil using multi-meter?	

Question	Candidate's answer
32 Describe Types and functions of hands free?	
33 Describe Techniques for Cleaning hands free section?	
34 Describe how to check continuity of Hands-free terminals using multi-meter?	
35 Describe Types and functions of vibrator?	

Question	Candidate's answer
36 Describe how to find rated resistance of Vibrator using multi-meter?	
37 Describe how to check continuity between vibrator and vibrator IC using multi-meter?	
38 Describe the functions of audio IC?	
39 Types of physical damages of audio IC	



Question	Candidate's answer
40 Describe how to continuity of audio IC points with PCB using multi-meter?	

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

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	CS Code: 071400642	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Repair/ Replace Hard ware Parts</b>	<b>Assessment Date (DD/MM/YY):</b>		

<b>Candidate Details</b>	Name.....  Registration/Roll Number.....
<b>Guidance for Candidate</b>	<p><b>To meet this standard, you are required to complete the following tasks within 180 min timeframe:</b></p> <p>20. <b>Assessment Task 1:</b> Perform chemical washing  21. <b>Assessment Task 2:</b> Replace Fixed Battery  22. <b>Assessment Task 3:</b> Replace Charging Connector / Base / NFC  23. <b>Assessment Task 4:</b> Replace Display / Glass  24. <b>Assessment Task 5:</b> Replace display Light IC  25. <b>Assessment Task 6:</b> Replace Key-pad / Connector  26. <b>Assessment Task 7:</b> Replace SIM Card Connector / Slot  27. <b>Assessment Task 8:</b> Replace Audio Components  28. <b>Assessment Task 9:</b> Replace Camera  29. <b>Assessment Task 10:</b> Replace Flash Light  30. <b>Assessment Task 11:</b> Replace Antenna Components  31. <b>Assessment Task 12:</b> Replace Blue-Tooth and Wi-Fi IC  32. <b>Assessment Task 13:</b> Replace Sensors.  33. <b>Assessment Task 14:</b> Repair / Replace Mother Board  34. <b>Assessment Task 15:</b> Replace Housing</p> <p><b>And complete:</b></p> <p>7. <b>Knowledge assessment test (Written or Oral)</b>  8. <b>Portfolios at the time of assessment (if any)</b></p>
<b>Minimum Evidence Required</b>	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Task 1: Perform chemical washing</b>  Performance Criteria 1: Arrange tools for cleaning and washing  Performance Criteria 2: Select chemicals for washing  Performance Criteria 3: Clean PCB from dust and moisture  Performance Criteria 4: Cover microphone, sensors and remove cameras before washing  Performance Criteria 5: Wash PCB and its components  Performance Criteria 6: Dry PCB and its components</p> <p><b>Task 2: Replace Fixed Battery</b>  Performance Criteria 1: Disassemble mobile phone without damage  Performance Criteria 2: Replace fix Battery Connectors if required  Performance Criteria 3: Replace fix battery as per requirement</p> <p><b>Task 3: Replace Charging Connector / Base / NFC</b>  Performance Criteria 1: Remove existing charging port / base without damage of PCB</p>

Performance Criteria 2: Replace new charging port / base as per standard  
Performance Criteria 3: Replace Near Field Communication (NFC) antenna and its connectors

Performance Criteria 4: Check rated voltage as per specification

**Task 4: Replace Display / Glass**

Performance Criteria 1: Arrange tools and equipment as per requirement

Performance Criteria 2: Remove glass without damaging display

Performance Criteria 3: Remove display

Performance Criteria 4: Install display / glass as per standard

**Task 5: Replace display Light IC**

Performance Criteria 1: Remove faulty display light IC without damaging other components on PCB

Performance Criteria 2: Install new display light IC as per standard

**Task 6: Replace Key-pad / Connector**

Performance Criteria 1: Remove key-pad / connector / ribbon as per requirement

Performance Criteria 2: Install new key-pad / connector / ribbon as per standard

**Task 7: Replace SIM Card Connector / Slot**

Performance Criteria 1: Remove Sim Card slot / Connector as per requirement

Performance Criteria 2: Install new Sim Card slot / Connector as per standard

**Task 8: Replace Audio Components**

Performance Criteria 1: Remove Ear Piece / Microphone / Ringer / Head phone Jack / Vibrator as per requirement

Performance Criteria 2: Install new /Ear Piece / Microphone / Ringer / Head phone Jack / Vibrator as per standard

**Task 9: Replace Camera**

Performance Criteria 1: Remove Camera as per requirement

Performance Criteria 2: Remove camera-connector if required

Performance Criteria 3: Install camera / connector as per standard

**Task 10: Replace Flash Light**

Performance Criteria 1: Remove Flash light as per requirement

Performance Criteria 2: Install new flash light as per standard

**Task 11: Replace Antenna Components**

Performance Criteria 1: Remove Antenna / Cable / Connector as per requirement

Performance Criteria 2: Install Antenna / Cable / Connector as per standard

**Task 12: Replace Blue-Tooth and Wi-Fi IC**

Performance Criteria 1: Remove Blue-Tooth / Wi-Fi IC as per requirement

Performance Criteria 2: Install Blue-Tooth / Wi-Fi IC as per standard

**Task 13: Replace Sensors.**

Performance Criteria 1: Remove light sensor / sound sensor / proximity sensor / Finger Print sensor as per requirement

Performance Criteria 2: Install light sensor / sound sensor / proximity sensor / Finger Print sensor as per standard

**Task 14: Repair / Replace Mother Board**

Performance Criteria 1: Repair Motherboard for connectivity

Performance Criteria 2: Replace new Motherboard as per standard if required

**Task 15: Replace Housing**

Performance Criteria 1: Remove Housing as per requirement

Performance Criteria 2: Install new Housing as per standard

**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)

071400642 **Repair/ Replace Hard ware Parts**

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> <span style="margin-left: 200px;">NOT YET COMPETENT <input type="checkbox"/></span> 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.**

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Candidate Signature..... Assessor Signature .....

Assessment Task 1		Perform chemical washing		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		Yes	No	Remarks
1.	Performance Criteria 1: Arranged tools for cleaning and washing			
2.	Performance Criteria 2: Selected chemicals for washing			
3	Performance Criteria 3: Cleaned PCB from dust and moisture			
4	Performance Criteria 4: Covered microphone, sensors and remove cameras before washing			
5	Performance Criteria 5: Washed PCB and its components			
6	Performance Criteria 6: Dried PCB and its components			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 2		Replace Fixed Battery		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		Yes	No	Remarks
1	Performance Criteria 1: Disassembled mobile phone without damage			
2	Performance Criteria 2: Replaced fix Battery Connectors if required			
3	Performance Criteria 3: Replaced fix battery as per requirement			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 3		Replace Charging Connector / Base / NFC		
<b>During the practical assessment, candidate demonstrated the following:</b>				
		Yes	No	Remarks
1	Performance Criteria 1: Removed existing charging port / base without damage of PCB			
2	Performance Criteria 2: Replaced new charging port / base as per standard			
3	Performance Criteria 3: Replaced Near Field Communication (NFC) antenna and its connectors			
4	Performance Criteria 4: Checked rated voltage as per specification			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 4</b>	<b>Replace Display / Glass</b>
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arranged tools and equipment as per requirement			
2	Performance Criteria 2: Removed glass without damaging display			
3	Performance Criteria 3: Removed display			
4	Performance Criteria 4: Installed display / glass as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 5</b>	<b>Replace display Light IC</b>
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Removed faulty display light IC without damaging other components on PCB			
2	Performance Criteria 2: Installed new display light IC as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 6</b>	<b>Replace Key-pad / Connector</b>
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Removed key-pad / connector / ribbon as per requirement			
2	Performance Criteria 2: Installed new key-pad / connector / ribbon as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 7</b>	<b>Replace SIM Card Connector / Slot</b>
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Removed Sim Card slot / Connector as per requirement			
2	Performance Criteria 2: Installed new Sim Card slot / Connector as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

<b>Assessment Task 8</b>	<b>Replace Audio Components</b>
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During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Removed Ear Piece / Microphone / Ringer / Head phone Jack / Vibrator as per requirement			
2	Performance Criteria 2: Installed new /Ear Piece / Microphone / Ringer / Head phone Jack / Vibrator as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 9	Replace Camera			
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Removed Camera as per requirement			
2	Performance Criteria 2: Removed camera-connector if required			
3	Performance Criteria 3: Installed camera / connector as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 10	Replace Flash Light			
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Removed Flash light as per requirement			
2	Performance Criteria 2: Installed new flash light as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 11	Replace Antenna Components			
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Removed Antenna / Cable / Connector as per requirement			
2	Performance Criteria 2: Installed Antenna / Cable / Connector as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		
Assessment Task 12	Replace Blue-Tooth and Wi-Fi IC			

During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Removed Blue-Tooth / Wi-Fi IC as per requirement			
2	Performance Criteria 2: Installed Blue-Tooth / Wi-Fi IC as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 13		Replace Sensors.		
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Removed light sensor / sound sensor / proximity sensor / Finger Print sensor as per requirement			
2	Performance Criteria 2: Installed light sensor / sound sensor / proximity sensor / Finger Print sensor as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 14		Repair / Replace Mother Board		
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Repaired Motherboard for connectivity			
2	Performance Criteria 2: Replaced new Motherboard as per standard if required			
<b>Competent</b>		<b>Not Yet Competent</b>		

Assessment Task 15		Replace Housing		
During the practical assessment, candidate demonstrated the following:				
1	Performance Criteria 1: Removed Housing as per requirement			
2	Performance Criteria 2: Installed new Housing as per standard			
<b>Competent</b>		<b>Not Yet Competent</b>		



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"/>			



<b>Title of Qualification:</b> National Vocational Certificate level 3, In Generator Mechanic	CS Code: 071400642	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Repair/ Replace Hard ware Parts</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

**WRITTEN ASSESSMENT**

Question	Candidate's answer
41 Describe names of cleaning tools?	
42 Describe types of chemicals use for washing/cleaning?	
43 Describe Techniques for cleaning/washing PCB and its components?	

Question	Candidate's answer
44 Describe Drying techniques for PCB and its components?	
45 Describe Types of fixed batteries?	
46 Describe Techniques of safe replacement of mobile phone fixed battery?	
47 Describe Types of charging ports?	

Question	Candidate's answer
48 Describe Techniques for replacement of charging ports?	
49 Describe near field communication (NFC) antenna?	
50 Describe Techniques for replacement of near field communication (NFC) antenna and its connectors?	
51 Describe Types of display and glass?	

Question	Candidate's answer
52 Describe Techniques for safe removal of glass /display using hot plate separator?	
53 Describe Techniques for safe installation of display/glass?	
54 Describe Types and function of display light IC?	
55 Describe Techniques for safe removal of display light IC using heat gun and soldering station?	

Question	Candidate's answer
56 Describe Techniques for safe installation of display light IC using heat gun and soldering station?	
57 Describe Types of Key-pad connector?	
58 Describe Safe replacement techniques for key-pad connector/ribbon?	
59 Describe Types of SIM card slot?	

Question	Candidate's answer
60 Describe Safe replacement techniques for SIM card slot using SMD work station?	
61 Describe Types of Audio components?	
62 Describe Safe replacement techniques for audio components?	
63 Describe Types of camera?	



Question	Candidate's answer
64 Describe Safe replacement techniques for camera module?	
65 Describe Types of flash light?	
66 Describe Safe replacement techniques for flash light?	
67 Describe Types and functions of antenna?	

Question	Candidate's answer
68 Describe Safe replacement techniques for antenna and its components?	
69 Describe Types of Bluetooth and Wi-Fi IC?	
70 Describe Safe replacement techniques for Bluetooth and Wi-Fi IC?	
71 Describe Different types and functions of sensors?	

Question	Candidate's answer
72 Describe Safe replacement techniques for different type of sensors?	
73 Describe Types of motherboard?	
74 Describe Safe repair/replacement techniques for motherboard?	
75 Describe Types of housing?	

Question	Candidate's answer
76 Describe Safe replacement techniques of housing?	

<b>Title of Qualification:</b> National Vocational Certificate level 3, In Mobile Phone Technician	CS Code: <b>0714E&amp;A07</b>	Level: 3	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>National Vocational Certificate Level – 3 in  Mobile Phone Technician</b>	<b>Assessment Date (DD/MM/YY):</b>		

Candidate Details	Name: .....  Registration/Roll Number: .....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following activities within 03 Hrs. time frame (for practical demonstration &amp; assessment):</b></p> <ol style="list-style-type: none"> <li><b>1. In a given situation to Diagnose and replace charging IC to conform its output rated voltage</b></li> </ol> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li><b>2. Knowledge assessment test (Written or Oral).</b></li> <li><b>3. Portfolios at the time of assessment (if any).</b></li> </ol>
Minimum Evidence Required	<p><b>During a practical assessment, under the observation by an assessor, you are required to “Diagnose and replace charging IC to conform its output rated voltage” by demonstrate the following criteria:</b></p> <p><b>Performance Criteria 1:</b> Arrange tools and equipment as per requirement  <b>Performance Criteria 2:</b> Check input/output voltage of charging IC  <b>Performance Criteria 3:</b> Apply soldering past on charging IC  <b>Performance Criteria 4:</b> Perform de-soldering of charging IC  <b>Performance Criteria 5:</b> Cleanup the pads of charging IC on PCB  <b>Performance Criteria 6:</b> Select appropriate IC  <b>Performance Criteria 7:</b> Perform soldering of new IC  <b>Performance Criteria 8:</b> Verify rated output voltage of IC with multi-meter</p>

	<p><b>Portfolios required at the time of assessment (if any) for</b></p> <p>Performance criteria for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.</p>
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### Self-Assessment Checklist

I can	<b>Candidate Name</b>	
	<b>Registration No.</b>	
	<b>Qualification</b>	<b>0714E&amp;A07 National Vocational Certificate Level – 3 in Mobile Phone Technician</b>
	<b>Purpose of Assessment</b>	<b>Summative Assessment</b>
	<b>Assessment Task</b>	In a given situation to <b>Diagnose and replace charging IC to conform its output rated voltage</b>

perform .....

Performance Criteria	Yes	No
1. Arrange tools and equipment as per requirement		
2. Check input/output voltage of charging IC		
3. Apply soldering past on charging IC		
4. Perform de-soldering of charging IC		
5. Cleanup the pads of charging IC on PCB		
6. Select appropriate IC		
7. Perform soldering of new IC		
8. verify rated output voltage of IC with multi-meter		

Candidate's Signature \_\_\_\_\_ Assessor's Signature \_\_\_\_\_

Date: \_\_\_\_\_



Candidate's Signature \_\_\_\_\_ Assessor's Signature \_\_\_\_\_

Each Assessment Task (with performance criteria)				
Assessment Task	Description of assessment task <b>Diagnose and replace charging IC to conform its output rated voltage</b>			
	During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1.	Arranged tools and equipment as per requirement			
2.	Checked input/output voltage of charging IC			
3.	Applied soldering past on charging IC			
4.	Performed de-soldering of charging IC			
5.	Cleaned up the pads of charging IC on PCB			
6.	Selected appropriate IC			
7.	Performed soldering of new IC			
8.	verified rated output voltage of IC with multi-meter			
<b>Competent</b> <input type="checkbox"/>		<b>Not Yet Competent</b> <input type="checkbox"/>		



## Knowledge Assessment

<b>Qualification</b>	<b>0714E&amp;A07 National Vocational Certificate Level – 3 in Mobile Phone Technician</b>
<b>Purpose of Assessment</b>	<b>Summative Assessment</b>
<b>Candidate Details</b>	Name: _____ Registration Number: _____ Signature: _____
<b>Assessment Outcome</b>	<b>COMPETENT</b> <input type="checkbox"/> <span style="margin-left: 150px;"><b>NOT YET COMPETENT</b></span> <input type="checkbox"/> <b>Name of the Assessor</b> _____ <b>Assessor's code:</b> _____ <b>Signature:</b> _____

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: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Feedback to the Candidate</b>

Candidate's Signature \_\_\_\_\_ Assessor's Signature \_\_\_\_\_

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		<b>Satisfactory</b>	<b>Not Satisfactory</b>
1.	What IC stands for?		
2	What PCB stands for?	<b>Satisfactory</b>	<b>Not Satisfactory</b>
3	What S.M.D. stands for?	<b>Satisfactory</b>	<b>Not Satisfactory</b>

4	What is the Maximum Output voltage of charging IC??	<b>Satisfactor y</b>	<b>Not Satisfactory</b>
5	What are the basic safety precautions during soldering?	<b>Satisfactory</b>	<b>Not Satisfactory</b>
6	What SIM stands for?	<b>Satisfactory</b>	<b>Not Satisfactory</b>

7	What IMEI stands for?	Satisfactory	<b>Not Satisfactory</b>

