## ELECTRONIC HOME APPLIANCES TECHNICIAN



ASSESSMENT PACKAGES

National Vocational Certificate Level 2

Version 1 - March 2014















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## ELECTRONIC HOME APPLIANCES TECHNICIAN



ASSESSMENT PACKAGES
National Vocational Certificate Level 2

Version 1 - March 2014





#### ASSESSMENT MATERIAL **EVIDENCE GUIDE** Qualification **ELECTRONIC HOME APPLIANCES TECHNICIAN** Electronic Home Appliance Technician Qualification Code: Level: 2 Credit: 80 Version: 1 **CONTENTS** 1. Assessment Summary and Record 2. Candidate Assessment 3. Assessor Judgement Guide 4. List of required tools/equipment, material and context of assessment ASSESSMENT AND Competent Not Yet Competent **ASSESSOR DETAILS** Assessment Re-Assessment Assessor's Code Assessor's Name: Assessor's Signature CANDIDATE Candidate's Name: **DETAILS** First Name Father's Name Institute Name and District CNIC/BFORM# Registration Number issued by Assessment Body: Female Transgender Gender Candidate's Consent I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal. Candidate's Signature: **ASSESSMENT** You can use this coversheet as an Assessment Results Summary Form. Simply post a photocopy of this completed **RESULTS** coversheet to NAVTTC **SUMMARY FORM NAVTTC OFFICE** 2. DATE ENTERED INTO 1. DATE FORM RECEIVED: DATABASE: ONLY

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## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY		ſ	METHOD	)	DESIRED OUTCOMES		ULT
NATURE OF ACTIVITY	WRITTEN	ORAL	PORTFOLIO	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF THE QUALIFICATION; SERVICING ELECTRONIC HOME APPLIANCES	COMPETENT	NOT YET COMPETENT
Practical Skill Demonstration				<b>✓</b>	<ul> <li>Apply Occupational Health and Safety</li> <li>Perform basic installation of electronic home appliances</li> <li>Repair home appliance</li> <li>Perform replacement components of home appliances</li> <li>Perform preventive maintenance</li> </ul>		
Knowledge Assessment		<b>✓</b>			Answer any questions your Assessor may have during the practical assessment		
Other Requirements			<b>✓</b>		Complete all course assignments		

#### **CANDIDATE ASSESSMENT**

Candidate's Name Father's Name

#### ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this Qualification you are required to perform the following task in **five(5)hours** timeframe:

- Service electronics home appliances including:
  - ✓ Service the faulty washing machine for standard operation
  - ✓ Service the faulty microwave oven for standard operation
  - ✓ Install Electronics home appliances

Important Note: The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
   ✓ Perform task(s) within standard timeframe

✓ Perform task(s) within standard timeframe							
ACTIVITI ES	CANDIDATE RESPONSE						
1. Complete practical task of servicing electronic home appliance sunder observation by an assessor	<ul> <li>Service the faulty washing machine for standard operation         <ul> <li>Prepare the unit and required materials, tools equipment and workplace properly for installation and service</li> <li>Verify repair/maintenance history</li> <li>Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description</li> <li>Test devices in accordance with standard procedures</li> <li>Undertake final inspection</li> <li>Respond to unplanned events or conditions</li> <li>Clean and clear work site of all debris</li> <li>Identify system defects/faults using appropriate tools and equipment</li> <li>Diagnose faults and defects</li> <li>Check and isolate circuits</li> <li>Check control settings/adjustments</li> <li>Replace defective parts/components with identical or recommended appropriate equivalent ratings</li> <li>Maintain/Repair consumer electronic products</li> <li>Re-assemble and test repaired consumer electronic product</li> <li>Dispose waste materials</li> <li>Apply safety rules and procedures</li> </ul> </li> <li>Service the faulty microwave oven for standard operation</li> <li>Prepare the unit and required materials, tools equipment and workplace properly for installation and</li> </ul>						
	service ✓ Verify repair/maintenance history						
	<ul> <li>✓ Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description</li> <li>✓ Test devices in accordance with standard procedures</li> </ul>						
	<ul><li>✓ Undertake final inspection</li><li>✓ Respond to unplanned events or conditions</li></ul>						
	✓ Clean and clear work site of all debris						

	<ul> <li>Identify system defects/faults using appropriate tools and equipment</li> <li>Diagnose faults and defects</li> <li>Check and isolate circuits</li> <li>Check control settings/adjustments</li> <li>Replace defective parts/components with identical or recommended appropriate equivalent ratings</li> <li>Maintain/Repair consumer electronic products</li> <li>Re-assemble and test repaired consumer electronic product</li> <li>Dispose waste materials</li> <li>Apply safety rules and procedures</li> <li>Install electronics home appliance</li> <li>Obtain and clarify work instructions</li> <li>Identify, prepare and obtain parts and components needed</li> <li>Prepare and check required materials, tools and equipment</li> </ul>
	✓ Prepare electronic components for assembly
	✓ Verify PCB layout in conformity with the schematic diagram
	✓ Prepare/Make printed circuit board modules
	✓ Clean PCB based on standard procedures ✓ Test and visually inspect the functionality of the PCB.
	<ul> <li>✓ Test and visually inspect the functionality of the PCB</li> <li>✓ Mount and solder electronic components</li> </ul>
	<ul> <li>✓ Apply soldering/de-soldering techniques and procedures</li> </ul>
	✓ Check soldered products
	✓ Assemble electronic components
	✓ Integrate modules and accessories
	<ul> <li>✓ Perform assembly procedures of electronic products</li> </ul>
	<ul> <li>Test and inspect assembled electronic products</li> <li>Subject finished products to final visual/sensory inspection and testing</li> </ul>
	✓ Subject infished products to find visualisensory inspection and testing ✓ Apply safety rules and procedures
	General performance criteria:
	✓ Follow health and safety procedure as per the requirements of given task
	✓ Prepare work station as per the requirements of task
	✓ Select tools/ equipment as per the requirements of task
	Report to supervisor in case of any contingency after taking necessary actions
	<ul> <li>✓ Complete the work by following sequence of operations</li> <li>✓ Perform task(s) within standard timeframe</li> </ul>
2. Other	Completed all course assignments
requirements	Sompletes an essess designments
·	
3. Answer any questions your Assessor may have during the practical	My answers to questions are correct and demonstrate my understanding of the topics and their application:
assessment	

## ASSESSOR JUDGEMENT GUIDE

#### INSTRUCTION FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Completes practical task of servicing electronic home appliances under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out:			
Service the faulty washing machine for	Prepare the unit and required materials, tools equipment and workplace properly for installation and service			
standard operation	Verify repair/maintenance history			
	Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description			
	Test devices in accordance with standard procedures			
	Undertake final inspection			
	Respond to unplanned events or conditions			
	Clean and clear work site of all debris			
	Identify system defects/faults using appropriate tools and equipment			
	Diagnose faults and defects			
	Check and isolate circuits			
	Check control settings/adjustments			
	Replace defective parts/components with identical or recommended appropriate equivalent ratings			
	Maintain/Repair consumer electronic products			
	Re-assemble and test repaired consumer electronic product			
	Dispose waste materials			
	Apply safety rules and procedures			
Serviced the faulty Microwave oven for standard operation	Prepare the unit and required materials, tools equipment and workplace properly for installation and service  Verify repair/maintenance history			
	Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Test devices in accordance with standard procedures			
	Undertake final inspection			
	Respond to unplanned events or conditions			
	Clean and clear work site of all debris			
	Identify system defects/faults using appropriate tools and equipment			
	Diagnose faults and defects			
	Check and isolate circuits			
	Check control settings/adjustments			
	Replace defective parts/components with identical or recommended appropriate equivalent ratings			
	Maintain/Repair consumer electronic products			
	Re-assemble and test repaired consumer electronic product			
	Dispose waste materials			
	Apply safety rules and procedures			
Install electronics home appliance	Obtain and clarify work instructions			
потте аррианее	Identify, prepare and obtain parts and components needed			
	*Prepare and check required materials, tools and equipment			
	Prepare electronic components for assembly			
	Verify PCB layout in conformity with the schematic diagram			
	Prepare/Make printed circuit board modules			
	Clean PCB based on standard procedures			
	Test and visually inspect the functionality of the PCB			
	Mount and solder electronic components			
	Apply soldering/de-soldering techniques and procedures			
	Check soldered products			
	Assemble electronic components			
	Integrate modules and accessories			
	Perform assembly procedures of electronic products			
	Test and inspect assembled electronic products			
	Subject finished products to final visual/sensory inspection and testing			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Apply safety rules and procedures			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			
2. Other Requirements	Completed all course assignments in the form of portfolio			
3. Answer any questions their	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.			
Assessor may have during the practical assessment	Assessor to document below all questions asked, if any, and the answers:			
assessment				

2. Lis	2. List of tools and equipment required (For five students)						
S. No	Name of Items (tools and equipment)	Quantity					
1	Coveralls						
2	Safety helmet						
3	Hand gloves						
4	Safety shoes						
5	Splash goggles						
6	Full face gas mask						
7	Apron (Acid suit)						
8	Dust mask						
9	Combination spanner set						
10	Allen key set						
11	Hammer						
12	Files set						
13	Screw driver set						
14	Combination plier						
15	Nose plier						
16	socket set						
17	Impact wrench						
18	Pipe wrench						
19	Adjustable wrench						
20	Inspection mirror						
21	Measuring tape						
22	Scriber						
23	Gauges (filler, universal, depth, go /not go,						
24	Vibration meter						
25	Tachometer						
26	dB meter						

3. Lis	3. List of consumable items required (For five students)						
S. No	Items	Quantity					
1	Cotton waste						
2	Anti-corrosion spray						
3	Lapping paste (Amery paste)						
4	Wire brush						
5	Painting brush						
6	Disposable coverall						
7	Alignment shims						
8	Grease						
9	Kerosene oil						





#### ASSESSMENT MATERIAL **EVIDENCE GUIDE ENSURE OCCUPATIONAL HEALTH & SAFETY** Qualification Electronic Home Appliance CS Code: Level: 2 Credit: 11 Version: 1 **CONTENTS** 1. Assessment Summary and Record 2. Candidate Assessment 3. Assessor Judgement Guide 4. List of required tools/equipment, material and context of assessment ASSESSMENT AND Competent Not Yet Competent ASSESSOR **DETAILS** Assessment Re-Assessment Assessor's Code Assessor's Name: Assessor's Signature DD YYYY CANDIDATE Candidate's Name: **DETAILS** First Name Father's Name Institute Name and District CNIC/BFORM# Registration Number issued by Assessment Body: Male Female Transgender Gender Candidate's Consent I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal. Candidate's Signature: **ASSESSMENT** You can use this coversheet as an Assessment Results Summary Form. Simply post a photocopy of this completed **RESULTS** coversheet to NAVTTC **SUMMARY FORM NAVTTC OFFICE** 2. DATE ENTERED INTO 1. DATE FORM DATABASE: ONLY RECEIVED:

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## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY			METHOD	)	DESIRED OUTCOMES		RESULT	
NATURE OF ACTIVITY	WRITTEN	ORAL	PORTFOLIO	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OFCOMPETENCY STANDARD: ENSURE OCCUPATIONAL HEALTH & SAFETY	COMPETENT	NOT YET COMPETENT	
Practical skill demonstration				<b>✓</b>	<ul> <li>Use of fire extinguisher</li> <li>Handling victim of electrical shock</li> <li>Apply first aid to injured person</li> </ul>			
Knowledge Assessment		✓			Answer any questions your Assessor may have during the practical assessment			
Other Requirement					• NA			

#### CANDIDATE ASSESSMENT

Candidate's Name ...... Father's Name .....

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this standard you are required to perform the following tasks in *2(two)* hours:

- Apply personal safety measures according to industry standard.
- Apply Tools and equipment safety measures according to industry standard.
- Apply environment safety measures according to industry standard.
- Apply safety measures according to job requirement as per industry standard.

**Important Note:** The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

ACTIVITIES	CANDIDATE RESPONSE
Complete practical task of ensuring Occupational Health & Safety under observation by an assessor	<ul> <li>Apply personal safety measures according to industry standard         <ul> <li>Wear personal protective equipment (PPE) according to industry standard</li> <li>Remove hazardous jewelleries for personal safety measures</li> </ul> </li> <li>Apply tools and equipment safety measures according to industry standard</li> <li>Identify tools according to job requirement</li> <li>Check tools condition as per standard</li> <li>Calibrate minor errors of tools and equipment</li> <li>Maintain tools according to job</li> <li>Use tools according to job</li> <li>Use tools according to job</li> <li>Apply environment safety measures according to industry standard</li> <li>Perform worksite housekeeping as per industry standard</li> <li>Check adequate light and ventilation</li> <li>Apply safety measures according to job</li> <li>Check adequate light and ventilation</li> <li>Apply safety measures according to job</li> <li>Check work permit/order as per job requirement</li> <li>Use of first Aid kit as per standard</li> <li>Use of fire extinguisher according to hazards</li> <li>Check isolation of appliances as per standard</li> <li>Role play may be used to provide evidence for these tasks.</li> <li>General performance criteria:         <ul> <li>Follow health and safety procedure as per the requirements of given task</li> <li>Prepare work station as per the requirements of task</li> </ul> </li> </ul>
	✓ Select tools/ equipment as per the requirements of task
	<ul> <li>✓ Report to supervisor in case of any contingency after taking necessary actions</li> <li>✓ Complete the work by following sequence of operations</li> </ul>
	✓ Perform task(s) within standard timeframe

2. Answer any	My answers to questions are correct and demonstrate my understanding of the topics and their application:
questions your	
Assessor may	
have during	
the practical	
assessment	

## **ASSESSOR JUDGEMENT GUIDE**

#### INSTRUCTION FOR ASSESSOR

THIS SECTION CONTAINS MODEL ANSWERS AND/OR MINIMUM EVIDENCE REQUIREMENTS. Where model answers are provided for the Assessor, the candidate's response is not required to be identical but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Complete practical task of ensuring Occupational Health & Safety under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out the following tasks.			
Applying personal safety measures according to industry	Wore personal protective equipment (PPE) according to industry standard			
standard	Removed hazardous jewelleries for personal safety measures			
Applying tools and equipment safety	Identified tools according to job requirement			
measures according to industry standard	Checked tools condition as per standard			
	Calibrated minor errors of tools and equipment			
	Maintained tools according to job			
	Used tools according to job			
	Checked service tag according to job requirement			
Applying environment safety measures	Performed worksite housekeeping as per industry standard			
according to industry standard	Checked adequate light and ventilation			
Applying safety measures according	Checked work permit/order as per job requirement			
to job	Used first Aid kit as per standard			
	Used fire extinguisher according to hazards			
	Checked isolation of appliances as per standard			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			

LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

This section contains information regarding:

Context of the assessment
List of required tools and equipment
List of consumables

Context of Assessment
This task will be performed in real time or through role-play.

2. Lis	2. List of tools and equipment (For five students)					
S. No	Items	Quantity				
1	Coveralls					
2	Safety helmet					
3	Hand gloves					
4	Safety shoes					
5	Splash goggles					
6	Apron					
7	Dust mask					
8	Allen key set					
9	Hammer					
10	Files set					
11	Screw driver set					
12	Combination plier					
13	Nose plier					
14	socket set					
15	Inspection mirror					
16	Measuring tape					

3. Lis	B. List of consumable items (For five students)					
S. No	Items	Quantity				
1	Cotton waste					
2	Anti-corrosion spray					
3	Lapping paste (Amery paste)					
4	Wire brush					
5	Painting brush					
6	Disposable coverall					
7	Alignment shims					
8	Grease					
9	Kerosene oil					
10	Fire extinguisher					





#### **ASSESSMENT** MATERIAL **EVIDENCE GUIDE** PERFORM BASIC INSTALLATION OF HOME Qualification **APPLIANCES** Electronic Home Appliance Technician CS Code: Level: 2 Credit: 14 Version: 1 1. Assessment Summary and Record **CONTENTS** 2. Candidate Assessment 3. Assessor Judgement Guide 4. List of required tools/equipment, material and context of assessment ASSESSMENT AND Competent Not Yet Competent **ASSESSOR DETAILS** Assessment Re-Assessment Assessor's Name: Assessor's Signature DD YYYY **CANDIDATE** Candidate's Name: **DETAILS** First Name Last Name Father's Name Institute Name and District CNIC/BFORM# Registration Number issued by Assessment Body: Transgender Male Female Gender Candidate's Consent I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal. Candidate's Signature: **ASSESSMENT** You can use this coversheet as an Assessment Results Summary Form. Simply post a photocopy of this completed **RESULTS** coversheet to NAVTTC SUMMARY FORM NAVTTC OFFICE

1. DATE FORM RECEIVED:

ONLY

2. DATE ENTERED INTO

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DATABASE:

## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY	METHOD		METHOD DESIRED OUTCOMES			RESULT	
NATURE OF ACTIVITY	WRITTEN	ORAL	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF COMPETENCY STANDARD: PERFORM BASIC INSTALLATION OF HOME APPLIANCES		NOT YET COMPETENT	
Practical Skill Demonstration			<b>√</b>	<ul> <li>Use appliance installation manual</li> <li>Install appliances as per industry standards</li> <li>Perform test run of home appliances</li> </ul>			
Knowledge Assessment				Answer any questions your Assessor may have during the practical assessment			
Other Requirements			• NA				

#### CANDIDATE ASSESSMENT

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this standard you are required to perform the following task in three (3) hours timeframe:

- Use Installation manual
- Install appliances according to manual
- Perform test run accordingly to industry standard

**Important Note:** The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

ACTIVITIES	CANDIDATE RESPONSE
1. Complete practical task of performing basic installation of home appliances under observation by an assessor	During a practical assessment, under observation by an assessor, I will correctly perform the following tasks:  • Use installation manual of appliances
	<ul> <li>✓ Complete the work by following sequence of operations</li> <li>✓ Perform task(s) within standard timeframe</li> </ul>

2. Answer any	My answers to questions are correct and demonstrate my understanding of the topics and their application:
questions your	
Assessor may	
have during	
the practical	
assessment	

## **ASSESSOR JUDGEMENT GUIDE**

#### INSTRUCTION FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Complete practical task of basic installation of home appliances under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out the following tasks:			
Use installation manual of appliances	Prepared tools and equipment according to instruction manual			
	Unpacked equipment accordingly			
	Inspected equipment and accessories			
Installation of appliances meets	Visited the location of installation of equipment for installable equipment			
standard procedure	Listed tools for installation			
	Arranged human resources for installable equipment			
	Made the location equipment			
	Fixed the foundation/base frame according to job			
	Positioned the equipment			
	Attached accessories accordingly			
Perform test run to ensure correct	Checked main supply			
operation	Checked electrical connection of equipment			
	Checked leakage(current, water, insulation) of equipment			
	Performed test run according to industry standard			
	Completed checklist of operation			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
ACTIVITIES  2. Answer any questions you may have during the practical assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.  Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attach.	YES	NO	ASSESSOR COMMENTS

S. No	Items	Quantity					
1	Coveralls						
2	Safety helmet						
3	Hand gloves						
4	Safety shoes						
5	Splash goggles						
6	Apron						
7	Dust mask						
8	Combination spanner set						
9	Allen key set						
10	Hammer						
11	Files set	4					
12	Screw driver set						
13	Combination plier						
14	Nose plier						
15	socket set						
16	Impact wrench						
17	Pipe wrench						
18	Adjustable wrench						
19	Inspection mirror						
20	Measuring tape						
21	Scriber						
22	Hand Drill Machine						
23	Vibration meter						
24	Tachometer						
25	dB meter						
26	Socket set						
27	Sprit level 1'						

3. Lis	3. List of consumables items (For five students)						
S. No	Items Quantity						
1	Cotton waste						
2	Drill bit (mason) set						
3	Drill bit (machine) set						
4	Steel nails as per job requirement						
5	Wooden screws as per job requirement						
6	Rawal plug as per job requirement						
7	Wooden plug as per job requirement						





ASSESSMENT MATERIAL  EVIDENCE GUIDE  Qualification Electronics Home Appliances CS Code: Level: 2 Credit: 23 Version: 1		I REPAIR OF HOME APPLIANCE
CONTENTS	Assessment Summary and     Candidate Assessment	Record
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	4. List of required tools/equip	ment, material and context of assessment
ASSESSMENT AND ASSESSOR	Competent	Not Yet Competent
DETAILS	Assessment	Re-Assessment
	Assessor's Name:	Assessor's Code
	Assessor's Signature	Date DD MM YYYY
CANDIDATE DETAILS	Candidate's Name:	First Name Last Name
	Father's Name	
	Institute Name and District	
	CNIC/BFORM#	
	Registration Number issued by Assessment Body:	
	Gender	Male Female Transgender
	Candidate's Consent	I agree to the time and date of the assessment and am aware of the requirements
	Candidate's Signature:	of the assessment. I fully understand my rights of appeal.
ASSESSMENT RESULTS SUMMARY FORM	You can use this coversheet as	s an <i>Assessment Results Summary Form</i> . Simply post a photocopy of this completed coversheet to <b>NAVTTC</b>
NAVTTC OFFICE ONLY	1. DATE FORM RECEIVED: DD MM	2. DATE ENTERED INTO DATABASE: YYYY DD MM YYYY

## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY	METHOD		)	DESIRED OUTCOMES	RESULT	
NATURE OF ACTIVITY	WRITTEN	ORAL	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF COMPETENCY STANDARD: PERFORM REPAIR OF HOME APPLIANCE	COMPETENT	NOT YET COMPETENT
Practical Skill Demonstration			<b>✓</b>	<ul> <li>Perform initial test run to determine repair requirements of appliance</li> <li>Dismantle appliance accordingly</li> <li>Diagnose fault of appliances</li> <li>Repair of appliances</li> <li>Assemble appliances using safe work practices</li> </ul>		
Knowledge Assessment		<b>✓</b>		Answer any questions your Assessor may have during the practical assessment		
Other requirements	<b>✓</b>			• NA		

#### CANDIDATE ASSESSMENT

Candidate's Name ...... Father's Name .....

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this standard you are required to perform the following task in **four (4)hours** timeframe:

- Perform test run of home appliance as per industry standard.
- Dismantle appliance as per industry standard.
- Repair of washing machine for standard operation.
- Repair of microwave for standard operation.
- Repair electrical Iron for standard operation.
- Repair of vacuum cleaner for standard operation.
- Repair of fans for standard operation.
- Repair of emergency light for standard operation.
- Repair of toaster for standard operation.
- Repair of kitchen appliances for standard operation.
- Assemble appliance as per industry standard.

Important Note: The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

Y Periorii (dsk(s) within standard timerame				
ACTIVITIES	CANDIDATE RESPONSE			
Complete practical task     of performing repair of     home appliance under     observation by an     assessor	<ul> <li>During a practical assessment, under observation by an assessor, I will correctly:</li> <li>Perform test run of home appliance as per industry standard         <ul> <li>Check short circuit as per industry standard</li> <li>Connect to main for operation of appliance</li> <li>Perform test run as per job requirement</li> <li>Note parameters of appliances</li> </ul> </li> <li>Dismantle appliance as per industry standard</li> </ul>			
	<ul> <li>✓ Check isolation of appliance as per safety standard</li> <li>✓ Use standard tools according to job requirement</li> <li>✓ Tag wires of appliances/ accessories for re-connection</li> <li>Diagnose fault of appliance as per industry standard</li> <li>✓ Inspect physical condition of appliance</li> <li>✓ Check electrical parts of appliance</li> <li>✓ Check mechanical parts of appliance</li> <li>✓ Check modules of appliance</li> <li>✓ Check operating penal</li> <li>✓ Tag faulty component/parts</li> </ul>			
	<ul> <li>Repair of washing machine</li> <li>✓ Fix rotor set for standard operation</li> <li>✓ Fix mechanical parts for standard operation</li> <li>✓ Fix electrical parts for standard operation</li> <li>✓ Adjust control accessories for standard operation</li> <li>✓ Align accessories for standard operation</li> <li>✓ Fix front/ control panel for standard operation</li> </ul>			

- ✓ Fix control module for standard operation
- Fix water leakage for standard operation
- ✓ Perform test run as per industry standard
- Repair of microwave
  - ✓ Fix safety fuse for standard operation
  - ✓ Fix mechanical parts for standard operation
  - ✓ Fix electrical parts for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Align accessories for standard operation
  - Fix front/ control panel for standard operation
  - Fix control module for standard operation
  - Fix magnetron for standard operation
  - ✓ Perform test run as per industry standard
- Repair electrical Iron
  - ✓ Fix de-scaling of surface for standard operation
  - ✓ Fix nozzles for standard operation
  - ✓ Fix thermostat for standard operation
  - ✓ Fix electrical parts for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Perform test run as per industry standard
- Repair of vacuum cleaner
  - ✓ Clean filter for standard operation
  - ✓ Fix housing for standard operation
  - ✓ Fix electrical parts for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Perform test run as per industry standard
- Repair of fans
  - ✓ Fix motor bushes for standard operation
  - ✓ Preform lubrication for standard operation
  - ✓ Fix mechanical parts for standard operation
  - ✓ Align fan blades for standard operation
  - ✓ Align parts and accessories for standard operation
  - ✓ Fix electrical parts for standard operation
  - ✓ Fix control parts/ penal for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Perform test run as per industry standard
- · Repair of emergency light
  - ✓ Fix rectification section for standard operation
  - ✓ Fix switching section for standard operation
  - ✓ Fix output section for standard operation
  - ✓ Fix PCB for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Fix front/ control panel for standard operation
  - ✓ Fix control module for standard operation
  - Perform test run as per industry standard
- Repair of toaster for standard operation
  - ✓ Fix thermostat for standard operation
  - ✓ Fix spring for standard operation
  - ✓ Fix electrical parts for standard operation
  - ✓ Fix mechanical parts for standard operation
  - ✓ Fix control parts for standard operation
  - ✓ Adjust control accessories for standard operation
  - ✓ Align accessories for standard operation
  - ✓ Perform test run as per industry standard Repair of kitchen appliances for standard operation
  - ✓ Fix carbon bushes for standard operation
    - ✓ Fix leakage seals for standard operation
    - ✓ Fix armature bushes for standard operation
    - Fix mechanical faults for standard operation
    - ✓ Fix electrical faults for standard operation
    - ✓ Adjust control accessories for standard operation
    - ✓ Align accessories for standard operation
    - ✓ Fix front/ control panel for standard operation
    - Perform test run as per industry standard

	<ul> <li>Assemble appliance as per industry standard</li> <li>Check standard tools according to job requirement</li> <li>Make internal connections as required job</li> <li>Assemble appliance as per industry standard</li> <li>Perform test run as per industry standard</li> <li>General performance criteria:</li> <li>Follow health and safety procedure as per the requirements of given task</li> <li>Prepare work station as per the requirements of task</li> <li>Select tools/ equipment as per the requirements of task</li> <li>Report to supervisor in case of any contingency after taking necessary actions</li> <li>Complete the work by following sequence of operations</li> <li>Perform task(s) within standard timeframe</li> </ul>
Answer any questions     your Assessor may have     during the practical     assessment	My answers to questions are correct and demonstrate my understanding of the topics and their application:

## ASSESSOR JUDGEMENT GUIDE

#### INSTRUCTIONS FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
Complete practical task of performing repair of home appliance under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out the following tasks;			COMMENTS
Performing test run of home appliance as per	Checked short circuit as per industry standard			
industry standard	Connected to main for operation of appliance			
	Performed test run as per job requirement			
	Recorded parameters of appliances			
Dismantling appliance as per industry standard	Checked isolation of appliance as per safety standard			
per muustry standard	Used standard tools according to job requirement			
	Tagged wires of appliances/ accessories for re- connection			
Diagnosing fault of appliance as per industry	Inspected physical condition of appliance			
standard	Checked electrical parts of appliance			
	Checked mechanical parts of appliance			
	Checked modules of appliance			
	Checked operating penal			
	Tagged faulty component/parts			
Repairing of washing machine	Fixed rotor set for standard operation			
macinic	Fixed mechanical parts for standard operation			
	Fixed electrical parts for standard operation			
	Adjusted control accessories for standard operation			
	Aligned accessories for standard operation			
	Fixed front/ control panel for standard operation			
	Fixed control module for standard operation			
	Fixed water leakage for standard operation			
	Performed test run as per industry standard			
Repairing of microwave for standard operation	Fixed safety fuse for standard operation			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Fixed mechanical parts for standard operation			
	Fixed electrical parts for standard operation			
	Adjusted control accessories for standard operation			
	Aligned accessories for standard operation			
	Fixed front/ control panel for standard operation			
	Fixed control module for standard operation			
	Fixed magnetron for standard operation			
	Performed test run as per industry standard			
Repair electrical Iron for standard operation	Fixed de-scaling of surface for standard operation			
Standard Operation	Fixed nozzles for standard operation			
	Fixed thermostat for standard operation			
	Fixed electrical parts for standard operation			
	Adjusted control accessories for standard operation			
	Performed test run as per industry standard			
Repair of vacuum cleaner for standard operation	Cleaned filter for standard operation			
Tor standard operation	Fixed housing for standard operation			
	Fixed electrical parts for standard operation			
	Adjusted control accessories for standard operation			
	Performed test run as per industry standard			
Repair of fans for standard operation	Fixed motor bushes for standard operation			
Garage operation	Preformed lubrication for standard operation			
	Fixed mechanical parts for standard operation			
	Aligned fan blades for standard operation			
	Aligned parts and accessories for standard operation			
	Fixed electrical parts for standard operation			
	Fixed control parts/ penal for standard operation			
	Adjusted control accessories for standard operation			
	Performed test run as per industry standard			
Repairing of emergency light	Fixed rectification section for standard operation			
J	Fixed switching section for standard operation			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Fixed output section for standard operation			
	Fixed PCB for standard operation			
	Adjusted control accessories for standard operation			
	Fixed front/ control panel for standard operation			
	Fixed control module for standard operation			
	Performed test run as per industry standard			
Repairing of toaster for standard operation	Fixed thermostat for standard operation			
Standard Operation	Fixed spring for standard operation			
	Fixed electrical parts for standard operation			
	Fixed mechanical parts for standard operation			
	Fixed control parts for standard operation			
	Adjusted control accessories for standard operation			
	Aligned accessories for standard operation			
	Performed test run as per industry standard			
Repairing of kitchen appliances for standard	Fixed carbon bushes for standard operation			
operation	Fixed leakage seals for standard operation			
	Fixed armature bushes for standard operation			
	Fixed mechanical faults for standard operation			
	Fixed electrical faults for standard operation			
	Adjusted control accessories for standard operation			
	Aligned accessories for standard operation			
	Fixed front/ control panel for standard operation			
	Performed test run as per industry standard			
Assembling appliance as per industry standard	Checked standard tools according to job requirement			
	Made internal connections as required job			
	Assembled appliance as per industry standard			
	Performed test run as per industry standard			
	Performed test run as per job requirement			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			
2. Answer any questions you may have during the practical assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.  Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attach.			

4	LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT
INSTRUCTIONS	This section contains information regarding:
Context of     Assessment	This task will be performed in <b>real time</b> .

2. Lis	List of tools and equipment required (For five students)		
S. No	Items	Quantity	
1	Coveralls		
2	Safety helmet		
3	Hand gloves		
4	Safety shoes		
5	Splash goggles		
6	Full face gas mask		
7	Apron (Acid suit)		
8	Dust mask		
9	Combination spanner set		
10	Allen key set		
11	Hammer		
12	Files set		
13	Screw driver set		
14	Combination plier		
15	Nose plier		
16	socket set		
17	Impact wrench		
18	Pipe wrench		
19	Adjustable wrench		
20	Inspection mirror		
21	Measuring tape		
22	Scriber		
23	Gauges (filler, universal, depth, go /not go,		
24	Vibration meter		
25	Tachometer		
26	dB meter		

3. Lis	3. List of consumable items required (For five students)		
S. No	Items	Quantity	
1	Cotton waste		
2	Anti-corrosion spray		
3	Lapping paste (Amery paste)		
4	Wire brush		
5	Painting brush		
6	Disposable coverall		
7	Alignment shims		
8	Grease		
9	Kerosene oil		





#### ASSESSMENT MATERIAL

#### EVIDENCE GUIDE

# Qualification Electronic Home Appliances Technician

CS Code: Level: 2 Credit: 15 Version: 1

# PERFORM REPLACEMENT COMPONENTS OF HOME APPLIANCES

Credit: 15				
Version: 1				
CONTENTS	Assessment Summary and Record     Candidate Assessment     Assessor Judgement Guide     List of required tools/ equipment, material and context of assessment			
ASSESSMENT AND ASSESSOR	Competent	Not Yet Competent		
DETAILS	Assessment	Re-Assessment		
	Assessor's Name:	Assessor's Code		
	Assessor's Signature	Date DD MM YYYY		
CANDIDATE DETAILS	Candidate's Name:	First Name Last Name		
	Father's Name			
	Institute Name and District			
	CNIC/BFORM#			
	Registration Number issued by Assessment Body:			
	Gender	Male Female Transgender		
	Candidate's Consent	I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal.		
	Candidate's Signature:			
ASSESSMENT RESULTS SUMMARY FORM	You can use this coversheet as an <i>Assessment Results Summary Form</i> . Simply post a photocopy of this completed coversheet to <b>NAVTTC</b>			
NAVTTC OFFICE ONLY	1. DATE FORM RECEIVED: DD MM	2. DATE ENTERED INTO DATABASE: DD MM YYYY		

## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY		Ī	METHOD		DESIRED OUTCOMES		ULT
NATURE OF ACTIVITY	WRITTEN	ORAL	PORTFOLIO	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OFFICOMPETENCY STANDARD: PERFORM REPLACEMENT COMPONENTSOF HOME APPLIANCES		NOT YET COMPETENT
Practical Skill Demonstration				<b>✓</b>	<ul> <li>Replace electrical or mechanical components</li> <li>Replace module of home appliances</li> <li>Re-assemble appliances</li> </ul>		
Knowledge Assessment		<b>✓</b>			Answer any questions your Assessor may have during the practical assessment		
Other Requirements			<b>✓</b>		• NA		

### CANDIDATE ASSESSMENT

Candidate's Name:	Father's Name

#### ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this standard you are required to perform the following tasks within three(3) hours:

- Identify faulty component and dismantle appliance according to industry standard
- Repair of washing machine for standard operation
- Repair of microwave for standard operation
- Repair electrical Iron for standard operation
- Repair of vacuum cleaner for standard operation
- Repair of fans for standard operation
- Repair of emergency light for standard operation
- Repair of toaster for standard operation

Important Note: The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
   ✓ Perform task(s) within standard timeframe

. onom taon	s) within Standard timename
ACTIVITIES	CANDIDATE RESPONSE
1. Complete practical task of performing replacement components of home appliances under observation by an assessor	<ul> <li>During a practical assessment, under observation by an assessor, I will correctly perform the following tasks:</li> <li>Dismantle electronic home appliance according to industry procedure         <ul> <li>Check isolation of appliance as per safety standard</li> <li>Use standard tools according to job requirement</li> <li>Tag wires of appliances/ accessories for correct re-connection</li> </ul> </li> <li>Replace electrical components, mechanical parts and module         <ul> <li>Replace electrical components accordingly</li> <li>Replace electrical component as per required specification</li> <li>Replace mechanical parts as per required specification</li> <li>Replace module as per required specification</li> <li>Adjust module, mechanical parts as per industry standard</li> </ul> </li> <li>Perform connection         <ul> <li>Connect electrical wires according to job requirement</li> <li>Perform insulation of wires as per industry standard</li> </ul> </li> <li>Assemble appliance         <ul> <li>Select standard tools according to job requirement</li> <li>Perform assembling of appliance as per industry standard</li> </ul> </li> <li>Assemble appliance         <ul> <li>Select standard tools according to job requirement</li> <li>Perform assembling of appliance as per industry standard</li> </ul> </li> <li>Follow health and safety procedure as per the requirements of given task</li> <li>Prepare work station as per the requirements of task</li> <li>Select tools/ equipment as per the requirements of task</li> <li>Report to supervisor in case of any contingency after taking necessary actions</li> <li>Complete the work by following sequence of operations</li> <li>Perform task(s) within standard timeframe</li> <!--</td--></ul>

Assessor may have during the practical assessment
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# ASSESSOR JUDGEMENT GUIDE

### INSTRUCTIONS FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Complete practical task of performing replacement components of home appliances under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out:			
Dismantling electronic home appliance	Checked isolation of appliance as per safety standard			
according to industry procedure	Used standard tools according to job requirement			
	Tagged wires of appliances/ accessories for correct re-connection			
	Removed faulty components			
	Replaced electrical component as per required specification			
	Replaced mechanical parts as per required specification			
	Replaced module as per required specification			
	Adjusted module, mechanical parts			
Performing connection	Connected electrical wires according to job requirement			
	Performed insulation of wires as per industry standard			
Assembling appliance	Selected standard tools according to job requirement			
	Performed assembling of appliance as per industry standard			
	Tested appliance for correct operation			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
2. Answer any questions you may have during the practical assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.			COMMENTS
,	Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attach.			

LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

This section contains information regarding:

Context of the assessment
List of required tools and equipment
List of consumables

This task will be performed in real time.

2. Li:	2. List of tools and equipment (For five students)					
S. No	Items	Quantity				
1	Coveralls					
2	Safety helmet					
3	Hand gloves					
4	Safety shoes					
5	Splash goggles					
6	Apron					
7	Dust mask					
8	Combination spanner set					
9	Allen key set					
10	Hammer					
11	Files set					
12	Screw driver set					
13	Combination plier					
14	Nose plier					
15	socket set					
16	Pipe wrench					
17	Adjustable wrench	***************************************				
18	Inspection mirror					
19	Measuring tape					
20	Scriber	3000				
21	Vibration meter					
22	Tachometer					
23	dB meter					

3. Lis	3. List of consumable items (For five students)					
S. No	Items	Quantity				
1	Cotton waste					
2	Anti-corrosion spray					
3	Lapping paste (Amery paste)					
4	Wire brush					
5	Painting brush					
6	Disposable coverall					
7	Alignment shims					
8	Grease					
9	Kerosene oil					





ASSESSMENT MATERIAL							
EVIDENCE GUIDE							
Qualification Electronic Home Appliances CS Code: Level: 2 Credit: 5 Version: 1	PERFORI	M PREVENTIVE MAINTENANCE					
CONTENTS	Assessment Summary and     Candidate Assessment     Assessor Judgement Guide     List of required tools/equip						
ASSESSMENT AND ASSESSOR	Competent	Not Yet Competent					
DETAILS	Assessment Re-Assessment						
	Assessor's Name:	Assessor's Code					
	Assessor's Signature	Date DD MM YYYY					
CANDIDATE DETAILS	Candidate's Name:	First Name Last Name					
	Father's Name						
	Institute Name and District						
	CNIC/BFORM#						
	Registration Number issued by Assessment Body:						
	Gender	Male Female Transgender					
	Candidate's Consent  Candidate's Signature:	I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal.					
ASSESSMENT RESULTS SUMMARY FORM		an Assessment Results Summary Form. Simply post a photocopy of this completed coversheet to NAVTTC					
NAVTTC OFFICE ONLY	1. DATE FORM RECEIVED: DD MM	2. DATE ENTERED INTO DATABASE:  YYYY  DD MM YYYY					

## **ASSESSMENT SUMMARY & RECORD**

ACTIVITY		METHOD	)	DESIRED OUTCOMES		DESIRED OUTCOMES		ULT
NATURE OF ACTIVITY	WRITTEN	ORAL	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF PERFORM PREVENTIVE MAINTENANCE	COMPETENT	NOT YET COMPETENT		
Practical Skill Demonstration			<b>✓</b>	<ul> <li>Lubricate mechanical parts</li> <li>Align appliance as per industry standard</li> <li>Check parts life cycle</li> </ul>				
Knowledge Assessment		<b>✓</b>		Answer any questions your Assessor may have during the practical assessment				
Other Requirements	<b>✓</b>			• NA				

### **CANDIDATE ASSESSMENT**

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this standard you are required to perform the following task in three (3) hours:

- Inspect equipment
- Clean equipment
- Lubricate mechanical parts
- Align equipment
- Ensure parts life cycle
- Demonstrate equipment

**Important Note:** The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

, i chomita	SN(3) Within Standard timename					
ACTIVITIES	CANDIDATE RESPONSE					
ACTIVITIES  1. Complete practical task of Preventive Maintenance under observation by an assessor	During a practical assessment, under observation by an assessor, I will correctly perform the following task:  Inspect equipment and fill checklist  Physical condition  Electrical components  Mechanical parts  Clean equipment according to industry standard  Arrange cleaning agent  Clean physical component  Clean electrical connection  Lubricate mechanical parts for standard operation  Arrange lubrication agent  Apply lubrication accordingly  Align equipment as per industry standard  Arrange alignment tools and equipment  Perform alignment of component/s  Check noise level  Demonstrate equipment standard operation					
	<ul> <li>✓ Arrange power source, tools and equipment</li> <li>✓ Attach accessories accordingly</li> <li>General performance criteria:</li> </ul>					
	<ul> <li>✓ Follow health and safety procedure as per the requirements of given task</li> <li>✓ Prepare work station as per the requirements of task</li> </ul>					
	✓ Select tools/ equipment as per the requirements of task					
	<ul> <li>✓ Report to supervisor in case of any contingency after taking necessary actions</li> <li>✓ Complete the work by following sequence of operations</li> </ul>					
	✓ Perform task(s) within standard timeframe					

2. Answer any	My answers to questions are correct and demonstrate my understanding of the topics and their application:
questions your	
Assessor may	
have during	
the practical	
assessment	

# ASSESSOR JUDGEMENT GUIDE

### INSTRUCTION FOR ASSESSOR

This section contains minimum evidence requirement. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Completes practical task of Preventive Maintenance under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out the following tasks.			
Inspecting equipment and fill checklist	Inspected physical condition			
	Inspected electrical components			
	Inspected mechanical parts			
Cleaning equipment to industry standard	Arranged cleaning agent			
	Cleaned physical component			
	Cleaned electrical connection			
Lubricating mechanical parts	Arranged lubrication agent			
	Applied lubrication accordingly			
Aligning equipment	Arranged alignment tools and equipment			
	Performed alignment of component/s as per industry standard			
	Checked noise level as per industry standard			
Demonstrating equipment standard	Arranged power source, tools and equipment			
operation	Attached accessories accordingly			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
ACTIVITIES  2. Answer any questions you may have during the practical assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.  Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attach.	YES	NO	ASSESSOR COMMENTS

4	LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT
INCTRUCTIONS	This section contains information regarding:
INSTRUCTIONS	Context of the assessment
	List of required tools and equipment
	List of consumables
<ol> <li>Context of</li> </ol>	
Assessment	This task will be performed in <b>real time</b> .

2. Lis	List of tools and equipment (for five students)					
S. No	Items	Quantity				
1	Coveralls					
2	Safety helmet					
3	Hand gloves					
4	Safety shoes					
5	Splash goggles					
6	Full face gas mask					
7	Apron (Acid suit)					
8	Dust mask					
9	Combination spanner set					
10	Allen key set					
11	Hammer					
12	Files set					
13	Screw driver set					
14	Combination plier					
15	Nose plier					
16	socket set					
17	Impact wrench					
18	Pipe wrench					
19	Adjustable wrench					
20	Inspection mirror					
21	Measuring tape					
22	Scriber					
23	Gauges (filler, universal, depth, go /not go,					
24	Vibration meter					
25	Tachometer					
26	dB meter					

3. Lis	3. List of consumable items (for five students)					
S. No	Items	Quantity				
1	Cotton waste					
2	Anti-corrosion spray					
3	Lapping paste (Amery paste)					
4	Wire brush					
5	Painting brush					
6	Disposable coverall					
7	Alignment shims					
8	Grease					
9	Kerosene oil					





### ASSESSMENT MATERIAL

## EVIDENCE GUIDE

### Qualification

Electronic Home Appliance Technician

**Qualification Code:** 

Level: 2 Credit: 80 Version: 1

CONTENTS

LECTRONIC	<b>VDDI</b>		TECHN	
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	Candidate Assessment     Assessor Judgement Guid     List of required tools/equip	e oment, material and context of assessment
ASSESSMENT AND ASSESSOR	Competent	Not Yet Competent
DETAILS	Assessment	Re-Assessment
	Assessor's Name:	Assessor's Code
	Assessor's Signature	Date DD MM YYYY
CANDIDATE DETAILS	Candidate's Name:	First Name Last Name
	Father's Name	
	Institute Name and District	
	CNIC/BFORM#	
	Registration Number issued by Assessment Body:	
	Gender	Male Female Transgender
	Candidate's Consent	I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal.
	Candidate's Signature:	or the assessment. I fully understand my rights of appeal.
ASSESSMENT RESULTS SUMMARY FORM	You can use this coversheet as	an Assessment Results Summary Form. Simply post a photocopy of this completed coversheet to <b>NAVTTC</b>
NAVTTC OFFICE ONLY	1. DATE FORM DD MM	2. DATE ENTERED INTO DATABASE: DD MM YYYY

1. Assessment Summary and Record

# **ASSESSMENT SUMMARY & RECORD**

ACTIVITY		ſ	METHOD	)	DESIRED OUTCOMES		ULT
NATURE OF ACTIVITY	WRITTEN	ORAL	PORTFOLIO	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF THE QUALIFICATION; SERVICING ELECTRONIC HOME APPLIANCES	COMPETENT	NOT YET COMPETENT
Practical Skill Demonstration				<b>✓</b>	<ul> <li>Apply Occupational Health and Safety</li> <li>Perform basic installation of electronic home appliances</li> <li>Repair home appliance</li> <li>Perform replacement components of home appliances</li> <li>Perform preventive maintenance</li> </ul>		
Knowledge Assessment		✓			Answer any questions your Assessor may have during the practical assessment		
Other Requirements			<b>✓</b>		Complete all course assignments		

## **CANDIDATE ASSESSMENT**

Candidate's Name Father's Name

#### ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

#### **GUIDANCE TO CANDIDATE**

To meet this Qualification you are required to perform the following task in **five(5)hours** timeframe:

- Service electronics home appliances including :
  - ✓ Service the faulty washing machine for standard operation
  - ✓ Service the faulty microwave oven for standard operation
  - ✓ Install Electronics home appliances

**Important Note:** The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

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ACTIVITI ES	CANDIDATE RESPONSE
1. Complete	During a practical assessment, under observation by an assessor, I will correctly:
practical task	
of servicing	Service the faulty washing machine for standard operation
electronic	✓ Prepare the unit and required materials, tools equipment and workplace properly for installation and
home	service
appliance	✓ Verify repair/maintenance history
sunder	✓ Conduct complete check-up of product and systems, and identifies, verifies and documents defects
observation by	against customer description
an assessor	✓ Test devices in accordance with standard procedures
	✓ Undertake final inspection
	✓ Respond to unplanned events or conditions
	✓ Clean and clear work site of all debris
	✓ Identify system defects/faults using appropriate tools and equipment
	✓ Diagnose faults and defects
	✓ Check and isolate circuits
	✓ Check control settings/adjustments
	✓ Replace defective parts/components with identical or recommended appropriate equivalent ratings
	✓ Maintain/Repair consumer electronic products
	✓ Re-assemble and test repaired consumer electronic product
	✓ Dispose waste materials
	✓ Apply safety rules and procedures
	Service the faulty microwave oven for standard operation
	✓ Prepare the unit and required materials, tools equipment and workplace properly for installation and
	service
	✓ Verify repair/maintenance history
	✓ Conduct complete check-up of product and systems, and identifies, verifies and documents defects
	against customer description
	✓ Test devices in accordance with standard procedures
	✓ Undertake final inspection
	✓ Respond to unplanned events or conditions
	✓ Clean and clear work site of all debris
L	

	Identify system defects/faults using appropriate tools and equipment
	✓ Diagnose faults and defects
	✓ Check and isolate circuits
	✓ Check control settings/adjustments
	✓ Replace defective parts/components with identical or recommended appropriate equivalent ratings
	✓ Maintain/Repair consumer electronic products
	Re-assemble and test repaired consumer electronic product
	✓ Dispose waste materials
	✓ Apply safety rules and procedures
	Install electronics home appliance
	✓ Obtain and clarify work instructions
	✓ Identify, prepare and obtain parts and components needed
	✓ Prepare and check required materials, tools and equipment
	✓ Prepare electronic components for assembly
	✓ Verify PCB layout in conformity with the schematic diagram
	✓ Prepare/Make printed circuit board modules
	✓ Clean PCB based on standard procedures
	✓ Test and visually inspect the functionality of the PCB
	✓ Mount and solder electronic components
	✓ Apply soldering/de-soldering techniques and procedures
	✓ Check soldered products
	✓ Assemble electronic components
	✓ Integrate modules and accessories
	✓ Perform assembly procedures of electronic products
	✓ Test and inspect assembled electronic products
	✓ Subject finished products to final visual/sensory inspection and testing
	✓ Apply safety rules and procedures
	General performance criteria:
	✓ Follow health and safety procedure as per the requirements of given task
	✓ Prepare work station as per the requirements of task
	✓ Select tools/ equipment as per the requirements of task
	✓ Report to supervisor in case of any contingency after taking necessary actions
	✓ Complete the work by following sequence of operations
	✓ Perform task(s) within standard timeframe
2. Other	Completed all course assignments
requirements	
3. Answer any	My answers to questions are correct and demonstrate my understanding of the topics and their application:
questions your	and the second and defined and demonstrate my understanding of the topics and their application.
Assessor may	
have during	
the practical	
assessment	
uoocooment	

## **ASSESSOR JUDGEMENT GUIDE**

### INSTRUCTION FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Completes practical task of servicing electronic home appliances under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out:			
Service the faulty washing machine for	Prepare the unit and required materials, tools equipment and workplace properly for installation and service			
standard operation	Verify repair/maintenance history			
	Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description			
	Test devices in accordance with standard procedures			
	Undertake final inspection			
	Respond to unplanned events or conditions			
	Clean and clear work site of all debris			4
	Identify system defects/faults using appropriate tools and equipment			
	Diagnose faults and defects			
	Check and isolate circuits			4
	Check control settings/adjustments			*
	Replace defective parts/components with identical or recommended appropriate equivalent ratings			
	Maintain/Repair consumer electronic products			
	Re-assemble and test repaired consumer electronic product			4
	Dispose waste materials			•
	Apply safety rules and procedures			
Serviced the faulty Microwave oven for	Prepare the unit and required materials, tools equipment and workplace properly for installation and service			
standard operation	Verify repair/maintenance history			
	Conduct complete check-up of product and systems, and identifies, verifies and documents defects against customer description			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Test devices in accordance with standard procedures			
	Undertake final inspection			
	Respond to unplanned events or conditions			
	Clean and clear work site of all debris			
	Identify system defects/faults using appropriate tools and equipment			
	Diagnose faults and defects			
	Check and isolate circuits			
	Check control settings/adjustments			
	Replace defective parts/components with identical or recommended appropriate equivalent ratings			
	Maintain/Repair consumer electronic products			
	Re-assemble and test repaired consumer electronic product			
	Dispose waste materials			
	Apply safety rules and procedures			
Install electronics home appliance	Obtain and clarify work instructions			
	Identify, prepare and obtain parts and components needed			
	*Prepare and check required materials, tools and equipment			
	Prepare electronic components for assembly			
	Verify PCB layout in conformity with the schematic diagram			
	Prepare/Make printed circuit board modules			*
	Clean PCB based on standard procedures			*
	Test and visually inspect the functionality of the PCB			
	Mount and solder electronic components			*
	Apply soldering/de-soldering techniques and procedures			
	Check soldered products			4
	Assemble electronic components			
	Integrate modules and accessories			
	Perform assembly procedures of electronic products			·
	Test and inspect assembled electronic products			
	Subject finished products to final visual/sensory inspection and testing			

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
	Apply safety rules and procedures			
General performance criteria	Followed health and safety procedure as per the requirements of given task			
	Prepared work station as per the requirements of task			
	Selected tools/ equipment as per the requirements of task			• • • • • • • • • • • • • • • • • • •
	Reported to supervisor in case of any contingency after taking necessary actions			
	Completed the work by following sequence of operations			
	Performed task(s) within standard timeframe			
2. Other Requirements	Completed all course assignments in the form of portfolio			
3. Answer any questions their	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application.			
Assessor may have during the practical assessment	Assessor to document below all questions asked, if any, and the answers:			
assessment				

LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

This section contains information regarding:
Context of the assessment
List of required tools and equipment
List of consumables

This task will be performed in real time.

2. Lis					
S. No	Name of Items ( tools and equipment)	Quantity			
1	Coveralls				
2	Safety helmet				
3	Hand gloves				
4	Safety shoes				
5	Splash goggles				
6	Full face gas mask				
7	Apron (Acid suit)				
8	Dust mask				
9	Combination spanner set				
10	Allen key set				
11	Hammer				
12	Files set				
13	Screw driver set				
14	Combination plier				
15	Nose plier				
16	socket set				
17	Impact wrench				
18	Pipe wrench				
19	Adjustable wrench				
20	Inspection mirror				
21	Measuring tape				
22	Scriber				
23	Gauges (filler, universal, depth, go /not go,				
24	Vibration meter				
25	Tachometer				
26	dB meter				

S. No	Items	Quantity
0. 110		Quantity
1	Cotton waste	
2	Anti-corrosion spray	
3	Lapping paste (Amery paste)	
4	Wire brush	
5	Painting brush	
6	Disposable coverall	
7	Alignment shims	
8	Grease	
9	Kerosene oil	

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