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FAN MANUFACTURING TECHNICIAN



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ASSESSMENT PACKAGE
National Vocational Certificate Level 2

Version 1 - May, 2019



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ASSESSMENT PACKAGE
National Vocational Certificate Level 2

Version 1 - May, 2019

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Fabricator"	CS Code: 072200900	Level: 02	Version: 01
Competency Standard Title: Maintain Tools and Equipment	Assessment Date (DD/MM/YY):	Assessment Time 4 Hour	

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> Assessment Task 1: Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Check the condition of tools & equipment before use</p> <p>Performance Criteria 2: Report for faulty tools and equipment</p> <p>Performance Criteria 3: Ensure insulation of tools and equipment</p> <p>Performance Criteria 4: Perform preventive maintenance as per standards</p> <p>Performance Criteria 5: Perform corrective maintenance (If required)</p> <p>Performance Criteria 6: Clean tools and equipment after use</p> <p>Performance Criteria 7: Check calibration status of the measuring tools</p> <p>Performance Criteria 8: Perform calibration of measuring tools as per standards</p> <p>Performance Criteria 9: Record calibration test results</p> <p>Performance Criteria 10: Place tools and equipment at appropriate place</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for maintenance of tools and equipment</p> <p>Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for calibration of measuring instruments</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1: Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Check Physical Condition of Tools & Equipment before use			
2	Performance Criteria 2: Report for faulty tools and equipment			
3	Performance Criteria 3: Ensure insulation of tools and equipment			
4	Performance Criteria 4: Perform preventive maintenance as per standards			
5	Performance Criteria 5: Perform corrective maintenance (If required)			
6	Performance Criteria 6: Clean Tools and equipment after use			
7	Performance Criteria 7: Check calibration status of the measuring tools			
8	Performance Criteria 8: Perform calibration of measuring tools as per standards			
9	Performance Criteria 9: Record Calibration test results			
10	Performance Criteria 10: Place tools and equipment at appropriate place			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio: Diary log of practical work		
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 1 for the evaluation of portfolio: Diary log of practical work for maintenance of tools and equipment			
2	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for calibration of measuring instruments			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Assistant Electrician"	CS Code: 072200901	Level: 02	Version: 01
Competency Standard Title: Measure Basic Electrical Units in Series and Parallel Circuits.	Assessment Date (DD/MM/YY):	Assessment Time: 4 Hour	

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <ol style="list-style-type: none"> 4. Assessment Task 1: Measure electrical power parameters of a circuit provided by your assessor 5. Assessment Task 2: Perform Capacitor and Inductor measurement of a circuit provided by your assessor 6. Assessment Task 3: Perform Open or Closed Circuit test of a Low Voltage Transformer as specified by your assessor 7. Assessment Task 4: Construct rectifier circuit as per specifications provided by your assessor <p>And complete:</p> <ol style="list-style-type: none"> 8. Knowledge assessment test (Written or Oral) 9. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Arrange tools, material and equipment for measurement of electric current</p> <p>Performance Criteria 2: Construct series arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit</p> <p>Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit</p> <p>Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit</p> <p>Performance Criteria 7: Perform measurement of AC Voltage in a series / Parallel circuit</p> <p>Performance Criteria 8: Perform measurement of DC Voltage in a series / Parallel circuit</p> <p>Performance Criteria 9: Perform Measurement of Electrical Power for the series / Parallel circuit</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Arrange tools, material and equipment for measurement of Capacitor / Inductor</p> <p>Performance Criteria 2: Perform measurement of Capacitor / Inductor with LCR meter</p> <p>Performance Criteria 3: Perform Open circuit / Short Circuit test for the Capacitor</p>

	<p>Assessment Task 3</p> <p>Performance Criteria 1: Arrange tools, material and equipment for the transformer test</p> <p>Performance Criteria 2: Perform Open circuit / Short Circuit test for the Low voltage Transformer</p>
	<p>Assessment Task 4</p> <p>Performance Criteria 1: Arrange tools, material and equipment for the Rectifier circuit</p> <p>Performance Criteria 2: Construct half wave / Full wave rectifier circuit</p> <p>Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification</p> <p>Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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				✓			
Assessment Task 1	Description of assessment task 1 Measure electrical power parameters of a circuit provided by your assessor						
During the practical assessment, candidate demonstrated the following:				Yes	No	Remarks	
1	Performance Criteria 1: Arrange tools, material and equipment for measurement of electric current						
2	Performance Criteria 2: Construct series arrangement of resistances in a closed loop circuit						
3	Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit						
4	Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit						
5	Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit						
6	Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit						
7	Performance Criteria 7: Perform measurement of AC Voltage in a series / Parallel circuit						
8	Performance Criteria 8: Perform measurement of DC Voltage in a series / Parallel circuit						
9	Performance Criteria 9: Perform Measurement of Electrical Power for the series / Parallel circuit						
Competent <input type="checkbox"/>				Not Yet Competent <input type="checkbox"/>			

Assessment Task 2		Description of assessment task 2		
		Perform Capacitor and Inductor measurement /Test of a circuit provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for measurement of Capacitor / Inductor			
2	Performance Criteria 2: Perform measurement of Capacitor / Inductor with LCR meter			
3	Performance Criteria 3: Perform Open circuit / Short Circuit test for the Capacitor			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3		
		Perform Open or Closed Circuit test of a Low Voltage Transformer as specified by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for the transformer test			
2	Performance Criteria 2: Perform Open circuit / Short Circuit test for the Low voltage Transformer			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4		
		Construct rectifier circuit as per specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for the Rectifier circuit			
2	Performance Criteria 2: Construct half wave / Full wave rectifier circuit			
3	Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification			
4	Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio		
		Diary log of practical work		
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 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Foundry Man"	CS Code: 072200904	Level: 02	Version: 01
Competency Standard Title: Perform cast iron casting, aluminium die casting and centrifugal/rotary casting	Assessment Date (DD/MM/YY):	Assessment Time: 10 Hours	

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>10. Assessment Task 1: Perform Cast Iron Casting of One Fan Part as per the specifications provided by your assessor</p> <p>11. Assessment Task 2: Perform Aluminium Die Casting of One Fan Part as per the specifications provided by your assessor</p> <p>12. Assessment Task 3: Perform Centrifugal/rotary Casting of One Fan Part as per the specifications provided by your assessor</p> <p>And complete:</p> <p>13. Knowledge assessment test (Written or Oral)</p> <p>14. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Ensure composition of moulding sand as per requirement</p> <p>Performance Criteria 2: Make mould as per provided pattern</p> <p>Performance Criteria 3: Dry mould as per requirement</p> <p>Performance Criteria 4: Prepare crucible furnace for melting</p> <p>Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron</p> <p>Performance Criteria 6: Perform furnace charging for melting</p> <p>Performance Criteria 7: Remove impurities from the surface of molten cast iron</p> <p>Performance Criteria 8: Ensure required temperature of molten cast iron</p> <p>Performance Criteria 9: Pour molten material in the sand mould</p> <p>Performance Criteria 10: Remove extra material from finished product</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Prepare crucible furnace for melting</p> <p>Performance Criteria 2: Arrange tools & equipment as per requirement</p> <p>Performance Criteria 3: Fill aluminium material in crucible</p> <p>Performance Criteria 4: Perform melting of aluminium material as per requirement</p> <p>Performance Criteria 5: Set die with the die casting machine</p> <p>Performance Criteria 6: Pour molten aluminium into the casting machine</p> <p>Performance Criteria 7: Adjust die casting machine parameters</p> <p>Performance Criteria 8: Perform aluminium die casting</p> <p>Performance Criteria 9: Remove extra material from finished product</p>

	<p>Assessment Task 3</p> <p>Performance Criteria 1: Prepare crucible furnace for melting</p> <p>Performance Criteria 2: Arrange tools & equipment as per requirement</p> <p>Performance Criteria 3: Fill aluminium material in crucible</p> <p>Performance Criteria 4: Perform melting of aluminium material as per requirement</p> <p>Performance Criteria 5: Perform preheating of mould</p> <p>Performance Criteria 6: Mounting of mould on rotary casting machine</p> <p>Performance Criteria 7: Pour molten aluminium into the mould</p> <p>Performance Criteria 8: Perform aluminium centrifugal casting</p> <p>Performance Criteria 9: Remove extra material from finished product</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for cast iron casting</p> <p>Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for aluminium die casting</p> <p>Performance criteria 3 for the evaluation of portfolio: Diary log of practical work for Centrifugal/rotary casting</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Assessment Task 1			Description of assessment task 1 Perform Cast Iron Casting of One Fan Part as per the specifications provided by your assessor				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance Criteria 1: Ensure composition of moulding sand as per requirement						
2	Performance Criteria 2: Make mould as per provided pattern						
3	Performance Criteria 3: Dry mould as per requirement						
4	Performance Criteria 4: Prepare crucible furnace for melting						
5	Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron						
6	Performance Criteria 6: Perform furnace charging for melting						
7	Performance Criteria 7: Remove impurities from the surface of molten cast iron						
8	Performance Criteria 8: Ensure required temperature of molten cast iron						
9	Performance Criteria 9: Pour molten material in the sand mould						
10	Performance Criteria 10: Remove extra material from finished product						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Perform Aluminium Die Casting of One Fan Part as per the specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare crucible furnace for melting			
2	Performance Criteria 2: Arrange tools & equipment as per requirement			
3	Performance Criteria 3: Fill aluminium material in crucible			
4	Performance Criteria 4: Perform melting of aluminium material as per requirement			
5	Performance Criteria 5: Set die with the die casting machine			
6	Performance Criteria 6: Pour molten aluminium into the casting machine			
7	Performance Criteria 7: Adjust die casting machine parameters			
8	Performance Criteria 8: Perform aluminium die casting			
9	Performance Criteria 9: Remove extra material from finished product			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Perform Centrifugal/rotary Casting of One Fan Part as per the specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare crucible furnace for melting			
2	Performance Criteria 2: Arrange tools & equipment as per requirement			
3	Performance Criteria 3: Fill aluminium material in crucible			
4	Performance Criteria 4: Perform melting of aluminium material as per requirement			
5	Performance Criteria 5: Perform preheating of mould			
6	Performance Criteria 6: Mounting of mould on rotary casting machine			
7	Performance Criteria 7: Pour molten aluminium into the mould			
8	Performance Criteria 8: Perform aluminium centrifugal casting			
9	Performance Criteria 9: Remove extra material from finished product			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log for practical work		
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 1 for the evaluation of portfolio: Diary log of practical work for cast iron casting			
2	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for aluminium die casting			
3	Performance criteria 3 for the evaluation of portfolio: Diary log of practical work for Centrifugal/rotary casting			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician	CS Code: 072200902	Level: 02	Version: 01
Competency Standard Title: Perform Packing and Storage.	Assessment Date (DD/MM/YY):	Assessment Time: 4 Hour	

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>15. Assessment Task 1: Perform packing of Seven Fans and place them at designated space ensuring the clear travel path at that place according to the guidelines provided by your assessor</p> <p>16. Assessment Task 2: Maintain and use appropriate firefighting equipment at place designated by your assessor</p> <p>17. Assessment Task 3: Maintain Inventory of raw materials and finished products in computer system and apply storage tags according to guidelines provided by your assessor</p> <p>And complete:</p> <p>18. Knowledge assessment test (Written or Oral)</p> <p>19. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1 Performance Criteria 1: Arrange packing material as per SOP. Performance Criteria 2: Interpret warning signs on packing box Performance Criteria 3: Place thermopore in a packing box as per standard Performance Criteria 4: Pack fan and its parts as per industry standard Performance Criteria 5: Maintain tagging system at store Performance Criteria 6: Follow instructions given on packing box Performance Criteria 7: Store fans at appropriate place as per instructions Performance Criteria 8: Interpret SOPs of store layout Performance Criteria 9: Follow SOPs of store layout Performance Criteria 10: Adopt material handling as per SOP</p> <p>Assessment Task 2 Performance Criteria 1: Check expiry of fire extinguisher Performance Criteria 2: Operate fire extinguisher Performance Criteria 3: Replace fire extinguisher</p> <p>Assessment Task 3 Performance Criteria 1: Prepare list of items Performance Criteria 2: Arrange items as per inventory list Performance Criteria 3: Store tagged items</p> <p>Portfolios required at the time of assessment (if any) for Not Required</p>

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							
Assessment Task 1			Description of assessment task 1 Perform packing of Seven Fans and place them at designated space ensuring the clear travel path at that place according to the guidelines provided by your assessor				
During the practical assessment, candidate demonstrated the following:				Yes	No	Remarks	
1	Performance Criteria 1: Arrange packing material as per SOP.						
2	Performance Criteria 2: Interpret warning signs on packing box						
3	Performance Criteria 3: Place thermos-core in a packing box as per standard						
4	Performance Criteria 4: Pack fan and its parts as per industry standard						
5	Performance Criteria 5: Maintain tagging system at store						
6	Performance Criteria 6: Follow instructions given on packing box						
7	Performance Criteria 7: Store fans at appropriate place as per instructions						
8	Performance Criteria 8: Interpret SOPs of store layout						
9	Performance Criteria 9: Follow SOPs of store layout						
10	Performance Criteria 10: Adopt material handling as per SOP						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Maintain and use appropriate firefighting equipment at place designated by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Check expiry of fire extinguisher			
2	Performance Criteria 2: Operate fire extinguisher			
3	Performance Criteria 3: Replace fire extinguish			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Maintain Inventory of Raw Materials and Finished products in computer system and apply storage tags according to guidelines provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare list of items			
2	Performance Criteria 2: Arrange items as per inventory list			
3	Performance Criteria 3: Store tagged items			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level 2 in Fan Manufacturing Technician "Painter"	CS Code: 072200903	Level: 02	Version: 01
Competency Standard Title: Perform Painting and powder coating	Assessment Date (DD/MM/YY):	Assessment Time: 4 Hour	

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>20. Assessment Task 1: Powder coat ONE fan body and three Fan blades provided by your assessor</p> <p>21. Assessment Task 2: Paint ONE fan body and three Fan blades provided by your assessor</p> <p>And complete:</p> <p>22. Knowledge assessment test (Written or Oral)</p> <p>23. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Start exhaust system</p> <p>Performance Criteria 2: Ensure environmental concern as per standard</p> <p>Performance Criteria 3: Arrange tools and equipment for powder coating</p> <p>Performance Criteria 4: Maintenance of air compressor and filter unit</p> <p>Performance Criteria 5: Place parts in spray booth</p> <p>Performance Criteria 6: Operating of powder coating machine</p> <p>Performance Criteria 7: Spray powder on parts for coating</p> <p>Performance Criteria 8: Bake coated parts in the oven for curing</p> <p>Performance Criteria 9: Cleaning of spray booth</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Remove dust from fan parts</p> <p>Performance Criteria 2: Clean parts with required chemicals</p> <p>Performance Criteria 3: Perform buffing for smooth surface</p> <p>Performance Criteria 4: Select paint and material as per requirement</p> <p>Performance Criteria 5: Mix paint and material as per SOP.</p> <p>Performance Criteria 6: Test paint composition</p> <p>Performance Criteria 7: Arrange tools and equipment as per requirement for paint</p> <p>Performance Criteria 8: Apply filler (filling material) if required</p> <p>Performance Criteria 9: Spray paint on fan parts</p> <p>Performance Criteria 10: Dry painted parts as per SOP</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for performing powder coating of Fan Parts</p> <p>Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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				✓			
Assessment Task 1	Description of assessment task 1 Powder coat ONE fan body and three Fan blades provided by your assessor						
During the practical assessment, candidate demonstrated the following:				Yes	No	Remarks	
1	Performance Criteria 1: Start exhaust system						
2	Performance Criteria 2: Ensure environmental concern as per standard						
3	Performance Criteria 3: Arrange tools and equipment for powder coating						
4	Performance Criteria 4: Maintenance of air compressor and filter unit						
5	Performance Criteria 5: Place parts in spray booth						
6	Performance Criteria 6: Operating of powder coating machine						
7	Performance Criteria 7: Spray powder on parts for coating						
8	Performance Criteria 8: Bake coated parts in the oven for curing						
9	Performance Criteria 9: Cleaning of spray booth						
Competent <input type="checkbox"/>				Not Yet Competent <input type="checkbox"/>			

Assessment Task 2		Description of assessment task 2 Paint ONE fan body and three Fan blades provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Remove dust from fan parts			
2	Performance Criteria 2: Clean parts with required chemicals			
3	Performance Criteria 3: Perform buffing for smooth surface			
4	Performance Criteria 4: Select paint and material as per requirement			
5	Performance Criteria 5: Mix paint and material as per SOP.			
6	Performance Criteria 6: Test paint composition			
7	Performance Criteria 7: Arrange tools and equipment as per requirement for paint			
8	Performance Criteria 8: Apply filler (filling material) if required			
9	Performance Criteria 9: Spray paint on fan parts			
10	Performance Criteria 10: Dry painted parts as per SOP			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log for practical work		
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 1 for the evaluation of portfolio: Diary log of practical work for performing powder coating of Fan Parts			
2	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Fabricator"	CS Code: 072200905	Level: 02	Version: 01
Competency Standard Title: Perform Parts Fabrication	Assessment Date (DD/MM/YY):	Assessment Time 4 hours	

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>24. Assessment Task 2: Prepare One Complete Fan Blade as per specification provided by your assessor</p> <p>25. Assessment Task 3: Prepare One Fan Stator and One set of punched rotor sheets as per specifications provided by your assessor</p> <p>26. Assessment Task 4: Prepare One safeguard for fan as per specification provided by your assessor</p> <p>27. Assessment Task 5: Perform pressing of shaft in armature plate provided by your assessor</p> <p>And complete:</p> <p>28. Knowledge assessment test (Written or Oral)</p> <p>29. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Mount the cutting die (punch and cavity) on press machine as per design</p> <p>Performance Criteria 2: Select gauge of the metallic sheet for blade and shank</p> <p>Performance Criteria 3: Feed and cut the metallic sheet as per design</p> <p>Performance Criteria 4: Mount punching die (punch and cavity) on the press machine</p> <p>Performance Criteria 5: Adjust the press machine for blade and shank punching</p> <p>Performance Criteria 6: Feed blade and shank for punching holes</p> <p>Performance Criteria 7: Select bending die set as per design</p> <p>Performance Criteria 8: Mount die set with the machine for blade and shank bending</p> <p>Performance Criteria 9: Load and bend the blade and shank as per standard</p> <p>Performance Criteria 10: Select rivets as per hole size</p> <p>Performance Criteria 11: Insert rivet in the shank and place it on the jig</p> <p>Performance Criteria 12: Place the blade and perform riveting</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Select cutting die as per requirement</p> <p>Performance Criteria 2: Mount cutting die on the press machine</p> <p>Performance Criteria 3: Feed and cut metal sheet as per design</p> <p>Performance Criteria 4: Perform punching as per requirement for punching slots in stator and rotor sheets</p> <p>Performance Criteria 5: .Perform binding and riveting of stator</p>

	<p>Assessment Task 3</p> <p>Performance Criteria 1: Select gauge of steel wire</p> <p>Performance Criteria 2: Adjust machine as per length</p> <p>Performance Criteria 3: Load wire into the machine</p> <p>Performance Criteria 4: Cut sample and inspect</p> <p>Performance Criteria 5: Select die according to design</p> <p>Performance Criteria 6: Perform bending as per requirement</p> <p>Performance Criteria 7: Select jig as per design</p> <p>Performance Criteria 8: Insert wires into jig and perform welding work</p>
	<p>Assessment Task 4</p> <p>Performance Criteria 1: Select armature and axle as per size</p> <p>Performance Criteria 2: Place and adjust jig on hydraulic press</p> <p>Performance Criteria 3: Load armature on the jig</p> <p>Performance Criteria 4: Insert axle in armature and press</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1: Diary log of practical work for different fabrication processes on Fan Parts</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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

Assessment Task 1		Description of assessment task 1 Prepare One Complete Fan Blade as per specification provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Mount the cutting die (punch and cavity) on press machine as per design			
2	Performance Criteria 2: Select gauge of the metallic sheet for blade and shank			
3	Performance Criteria 3: Feed and cut the metallic sheet as per design			
4	Performance Criteria 4: Mount punching die (punch and cavity) on the press machine			
5	Performance Criteria 5: Adjust the press machine for blade and shank punching			
6	Performance Criteria 6: Feed blade and shank for punching holes			
7	Performance Criteria 7: Select bending die set as per design			
8	Performance Criteria 8: Mount die set with the machine for blade and shank bending			
9	Performance Criteria 9: Load and bend the blade and shank as per standard			
10	Performance Criteria 10: Select rivets as per hole size			
11	Performance Criteria 11: Insert rivet in the shank and place it on the jig			
12	Performance Criteria 12: Place the blade and perform riveting			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 Prepare One Fan Stator and One set of punched rotor sheets as per specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Select cutting die as per requirement			
2	Performance Criteria 2: Mount cutting die on the press machine			
3	Performance Criteria 3: Feed and cut metal sheet as per design			
4	Performance Criteria 4: Perform punching as per requirement for punching slots in stator and rotor sheets			
5	Performance Criteria 5: Perform binding and riveting of stator			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Prepare One safeguard for fan as per specification provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Select gauge of steel wire			
2	Performance Criteria 2: Adjust machine as per length			
3	Performance Criteria 3: Load wire into the machine			
4	Performance Criteria 4: Cut sample and inspect			
5	Performance Criteria 5: Select die according to design			
6	Performance Criteria 6: Perform bending as per requirement			
7	Performance Criteria 7: Select jig as per design			
8	Performance Criteria 8: Insert wires into jig and perform welding work			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 Perform pressing of shaft in armature plate provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Select armature and axle as per size			
2	Performance Criteria 2: Place and adjust jig on hydraulic press			
3	Performance Criteria 3: Load armature on the jig			
4	Performance Criteria 4: Insert axle in armature and press			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log for practical work		
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 1: Diary log of practical work for different fabrication processes on Fan Parts			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Fabricator"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform part fabrication Maintain tools and equipment	Assessment Date (DD/MM/YY):	Assessment Time 04:00 Hours	

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>30. Assessment Task 1: Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor</p> <p>31. Assessment Task 2: Prepare One Fan Stator and One set of punched rotor sheets as per specifications provided by your assessor</p> <p>And complete:</p> <p>32. Knowledge assessment test (Written or Oral)</p> <p>33. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Check the condition of tools & equipment before use</p> <p>Performance Criteria 2: Report for faulty tools and equipment</p> <p>Performance Criteria 3: Ensure insulation of tools and equipment</p> <p>Performance Criteria 4: Perform preventive maintenance as per standards</p> <p>Performance Criteria 5: Perform corrective maintenance (If required)</p> <p>Performance Criteria 6: Clean tools and equipment after use</p> <p>Performance Criteria 7: Check calibration status of the measuring tools</p> <p>Performance Criteria 8: Perform calibration of measuring tools as per standards</p> <p>Performance Criteria 9: Record calibration test results</p> <p>Performance Criteria 10: Place tools and equipment at appropriate place</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Select cutting die as per requirement</p> <p>Performance Criteria 2: Mount cutting die on the press machine</p> <p>Performance Criteria 3: Feed and cut metal sheet as per design</p> <p>Performance Criteria 4: Perform punching as per requirement for punching slots in stator and rotor sheets</p> <p>Performance Criteria 5: .Perform binding and riveting of stator</p> <p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1: Diary log of practical work for different fabrication processes on Fan Parts</p>

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1		
		Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Check the condition of tools & equipment before use			
2	Performance Criteria 2: Report for faulty tools and equipment			
3	Performance Criteria 3: Ensure insulation of tools and equipment			
4	Performance Criteria 4: Perform preventive maintenance as per standards			
5	Performance Criteria 5: Perform corrective maintenance (If required)			
6	Performance Criteria 6: Clean tools and equipment after use			
7	Performance Criteria 7: Check calibration status of the measuring tools			
8	Performance Criteria 8: Perform calibration of measuring tools as per standards			
9	Performance Criteria 9: Record calibration test results			
10	Performance Criteria 10: Place tools and equipment at appropriate place			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2		
		Prepare One Fan Stator and One set of punched rotor sheets as per specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Select cutting die as per requirement			
2	Performance Criteria 2: Mount cutting die on the press machine			
3	Performance Criteria 3: Feed and cut metal sheet as per design			
4	Performance Criteria 4: Perform punching as per requirement for punching slots in stator and rotor sheets			
5	Performance Criteria 5: .Perform binding and riveting of stator			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary Log of practical work		
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 1: Diary log of practical work for different fabrication processes on Fan Parts			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Foundry Man"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform cast iron casting, aluminium die casting and centrifugal/rotary casting	Assessment Date (DD/MM/YY):	Assessment Time: 10 Hours	

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>34. Assessment Task 1: Perform Cast Iron Casting of One Fan Part as per the specifications provided by your assessor</p> <p>35. Assessment Task 2: Perform Aluminium Die Casting of One Fan Part as per the specifications provided by your assessor</p> <p>36. Assessment Task 3: Perform Centrifugal/rotary Casting of One Fan Part as per the specifications provided by your assessor</p> <p>And complete:</p> <p>37. Knowledge assessment test (Written or Oral)</p> <p>38. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Ensure composition of moulding sand as per requirement</p> <p>Performance Criteria 2: Make mould as per provided pattern</p> <p>Performance Criteria 3: Dry mould as per requirement</p> <p>Performance Criteria 4: Prepare crucible furnace for melting</p> <p>Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron</p> <p>Performance Criteria 6: Perform furnace charging for melting</p> <p>Performance Criteria 7: Remove impurities from the surface of molten cast iron</p> <p>Performance Criteria 8: Ensure required temperature of molten cast iron</p> <p>Performance Criteria 9: Pour molten material in the sand mould</p> <p>Performance Criteria 10: Remove extra material from finished product</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Prepare crucible furnace for melting</p> <p>Performance Criteria 2: Arrange tools & equipment as per requirement</p> <p>Performance Criteria 3: Fill aluminium material in crucible</p> <p>Performance Criteria 4: Perform melting of aluminium material as per requirement</p> <p>Performance Criteria 5: Set die with the die casting machine</p> <p>Performance Criteria 6: Pour molten aluminium into the casting machine</p> <p>Performance Criteria 7: Adjust die casting machine parameters</p> <p>Performance Criteria 8: Perform aluminium die casting</p> <p>Performance Criteria 9: Remove extra material from finished product</p>

Assessment Task 3

Performance Criteria 1: Prepare crucible furnace for melting

Performance Criteria 2: Arrange tools & equipment as per requirement

Performance Criteria 3: Fill aluminium material in crucible

Performance Criteria 4: Perform melting of aluminium material as per requirement

Performance Criteria 5: Perform preheating of mould

Performance Criteria 6: Mounting of mould on rotary casting machine

Performance Criteria 7: Pour molten aluminium into the mould

Performance Criteria 8: Perform aluminium centrifugal casting

Performance Criteria 9: Remove extra material from finished product

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

Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for cast iron casting

Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for aluminium die casting

Performance criteria 3 for the evaluation of portfolio: Diary log of practical work for Centrifugal/rotary casting

Continued on following page

Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Nature of Activity							
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement				✓			
Assessment Task 1			Description of assessment task 1 Perform Cast Iron Casting of One Fan Part as per the specifications provided by your assessor				
During the practical assessment, candidate demonstrated the following:					Yes	No	Remarks
1	Performance Criteria 1: Ensure composition of moulding sand as per requirement						
2	Performance Criteria 2: Make mould as per provided pattern						
3	Performance Criteria 3: Dry mould as per requirement						
4	Performance Criteria 4: Prepare crucible furnace for melting						
5	Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron						
6	Performance Criteria 6: Perform furnace charging for melting						
7	Performance Criteria 7: Remove impurities from the surface of molten cast iron						
8	Performance Criteria 8: Ensure required temperature of molten cast iron						
9	Performance Criteria 9: Pour molten material in the sand mould						
10	Performance Criteria 10: Remove extra material from finished product						
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>				

Assessment Task 2		Description of assessment task 2 Perform Aluminium Die Casting of One Fan Part as per the specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare crucible furnace for melting			
2	Performance Criteria 2: Arrange tools & equipment as per requirement			
3	Performance Criteria 3: Fill aluminium material in crucible			
4	Performance Criteria 4: Perform melting of aluminium material as per requirement			
5	Performance Criteria 5: Set die with the die casting machine			
6	Performance Criteria 6: Pour molten aluminium into the casting machine			
7	Performance Criteria 7: Adjust die casting machine parameters			
8	Performance Criteria 8: Perform aluminium die casting			
9	Performance Criteria 9: Remove extra material from finished product			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Perform Centrifugal/rotary Casting of One Fan Part as per the specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Prepare crucible furnace for melting			
2	Performance Criteria 2: Arrange tools & equipment as per requirement			
3	Performance Criteria 3: Fill aluminium material in crucible			
4	Performance Criteria 4: Perform melting of aluminium material as per requirement			
5	Performance Criteria 5: Perform preheating of mould			
6	Performance Criteria 6: Mounting of mould on rotary casting machine			
7	Performance Criteria 7: Pour molten aluminium into the mould			
8	Performance Criteria 8: Perform aluminium centrifugal casting			
9	Performance Criteria 9: Remove extra material from finished product			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log for practical work			
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 1 for the evaluation of portfolio: Diary log of practical work for cast iron casting				
2	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for aluminium die casting				
3	Performance criteria 3 for the evaluation of portfolio: Diary log of practical work for Centrifugal/rotary casting				
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>			

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Painter"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform Painting and powder coating Perform packing and storage	Assessment Date (DD/MM/YY):	Assessment Time: 4 Hour	

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>39. Assessment Task 1: Perform packing of Seven Fans and place them at designated space ensuring the clear travel path at that place according to the guidelines provided by your assessor</p> <p>40. Assessment Task 2: Powder coat ONE fan body and three Fan blades provided by your assessor</p> <p>41. Assessment Task 3: Paint ONE fan body and three Fan blades provided by your assessor</p> <p>And complete:</p> <p>42. Knowledge assessment test (Written or Oral)</p> <p>43. Portfolios at the time of assessment (if any)</p>
	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Arrange packing material as per SOP.</p> <p>Performance Criteria 2: Interpret warning signs on packing box</p> <p>Performance Criteria 3: Place thermo-pore in a packing box as per standard</p> <p>Performance Criteria 4: Pack fan and its parts as per industry standard</p> <p>Performance Criteria 5: Maintain tagging system at store</p> <p>Performance Criteria 6: Follow instructions given on packing box</p> <p>Performance Criteria 7: Store fans at appropriate place as per instructions</p> <p>Performance Criteria 8: Interpret SOPs of store layout</p> <p>Performance Criteria 9: Follow SOPs of store layout</p> <p>Performance Criteria 10: Adopt material handling as per SOP</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Start exhaust system</p> <p>Performance Criteria 2: Ensure environmental concern as per standard</p> <p>Performance Criteria 3: Arrange tools and equipment for powder coating</p> <p>Performance Criteria 4: Maintenance of air compressor and filter unit</p> <p>Performance Criteria 5: Place parts in spray booth</p> <p>Performance Criteria 6: Operating of powder coating machine</p> <p>Performance Criteria 7: Spray powder on parts for coating</p> <p>Performance Criteria 8: Bake coated parts in the oven for curing</p> <p>Performance Criteria 9: Cleaning of spray booth</p>

<p>Assessment Task 3</p> <p>Performance Criteria 1: Remove dust from fan parts</p> <p>Performance Criteria 2: Clean parts with required chemicals</p> <p>Performance Criteria 3: Perform buffing for smooth surface</p> <p>Performance Criteria 4: Select paint and material as per requirement</p> <p>Performance Criteria 5: Mix paint and material as per SOP.</p> <p>Performance Criteria 6: Test paint composition</p> <p>Performance Criteria 7: Arrange tools and equipment as per requirement for paint</p> <p>Performance Criteria 8: Apply filler (filling material) if required</p> <p>Performance Criteria 9: Spray paint on fan parts</p> <p>Performance Criteria 10: Dry painted parts as per SOP</p>
<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for performing powder coating of Fan Parts</p> <p>Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts</p>

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Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1		
		Perform packing of Seven Fans and place them at designated space ensuring the clear travel path at that place according to the guidelines provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange packing material as per SOP.			
2	Performance Criteria 2: Interpret warning signs on packing box			
3	Performance Criteria 3: Place thermo-pore in a packing box as per standard			
4	Performance Criteria 4: Pack fan and its parts as per industry standard			
5	Performance Criteria 5: Maintain tagging system at store			
6	Performance Criteria 6: Follow instructions given on packing box			
7	Performance Criteria 7: Store fans at appropriate place as per instructions			
8	Performance Criteria 8: Interpret SOPs of store layout			
9	Performance Criteria 9: Follow SOPs of store layout			
10	Performance Criteria 10: Adopt material handling as per SOP			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 Powder coat ONE fan body and three Fan blades provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Start exhaust system			
2	Performance Criteria 2: Ensure environmental concern as per standard			
3	Performance Criteria 3: Arrange tools and equipment for powder coating			
4	Performance Criteria 4: Maintenance of air compressor and filter unit			
5	Performance Criteria 5: Place parts in spray booth			
6	Performance Criteria 6: Operating of powder coating machine			
7	Performance Criteria 7: Spray powder on parts for coating			
8	Performance Criteria 8: Bake coated parts in the oven for curing			
9	Performance Criteria 9: Cleaning of spray booth			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Paint ONE fan body and three Fan blades provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Remove dust from fan parts			
2	Performance Criteria 2: Clean parts with required chemicals			
3	Performance Criteria 3: Perform buffing for smooth surface			
4	Performance Criteria 4: Select paint and material as per requirement			
5	Performance Criteria 5: Mix paint and material as per SOP.			
6	Performance Criteria 6: Test paint composition			
7	Performance Criteria 7: Arrange tools and equipment as per requirement for paint			
8	Performance Criteria 8: Apply filler (filling material) if required			
9	Performance Criteria 9: Spray paint on fan parts			
10	Performance Criteria 10: Dry painted parts as per SOP			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log for practical work			
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 1 for the evaluation of portfolio: Diary log of practical work for performing powder coating of Fan Parts				
2	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts				
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>			

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician “Assistant Electrician”	CS Code:	Level: 02	Version: 01
Competency Standard Title: Measure Basic Electrical Units in Series and Parallel Circuits.	Assessment Date (DD/MM/YY):	Assessment Time: 4 Hour	

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>44. Assessment Task 1: Measure electrical power parameters of a circuit provided by your assessor</p> <p>45. Assessment Task 2: Perform Capacitor and Inductor measurement of a circuit provided by your assessor</p> <p>46. Assessment Task 3: Perform Open or Closed Circuit test of a Low Voltage Transformer as specified by your assessor</p> <p>47. Assessment Task 4: Construct rectifier circuit as per specifications provided by your assessor</p> <p>And complete:</p> <p>48. Knowledge assessment test (Written or Oral)</p> <p>49. Portfolios at the time of assessment (if any)</p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Arrange tools, material and equipment for measurement of electric current</p> <p>Performance Criteria 2: Construct series arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit</p> <p>Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit</p> <p>Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit</p> <p>Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit</p> <p>Performance Criteria 7: Perform measurement of AC Voltage in a series / Parallel circuit</p> <p>Performance Criteria 8: Perform measurement of DC Voltage in a series / Parallel circuit</p> <p>Performance Criteria 9: Perform Measurement of Electrical Power for the series / Parallel circuit</p> <p>Assessment Task 2</p> <p>Performance Criteria 1: Arrange tools, material and equipment for measurement of Capacitor / Inductor</p> <p>Performance Criteria 2: Perform measurement of Capacitor / Inductor with LCR meter</p> <p>Performance Criteria 3: Perform Open circuit / Short Circuit test for the Capacitor</p>

	<p>Assessment Task 3</p> <p>Performance Criteria 1: Arrange tools, material and equipment for the transformer test</p> <p>Performance Criteria 2: Perform Open circuit / Short Circuit test for the Low voltage Transformer</p>
	<p>Assessment Task 4</p> <p>Performance Criteria 1: Arrange tools, material and equipment for the Rectifier circuit</p> <p>Performance Criteria 2: Construct half wave / Full wave rectifier circuit</p> <p>Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification</p> <p>Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope</p>
	<p>Portfolios required at the time of assessment (if any) for</p> <p>Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit</p>

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Assessors Judgment 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:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:.....

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				✓			
Assessment Task 1	Description of assessment task 1 Measure electrical power parameters of a circuit provided by your assessor						
During the practical assessment, candidate demonstrated the following:				Yes	No	Remarks	
1	Performance Criteria 1: Arrange tools, material and equipment for measurement of electric current						
2	Performance Criteria 2: Construct series arrangement of resistances in a closed loop circuit						
3	Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit						
4	Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit						
5	Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit						
6	Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit						
7	Performance Criteria 7: Perform measurement of AC Voltage in a series / Parallel circuit						
8	Performance Criteria 8: Perform measurement of DC Voltage in a series / Parallel circuit						
9	Performance Criteria 9: Perform Measurement of Electrical Power for the series / Parallel circuit						
Competent <input type="checkbox"/>				Not Yet Competent <input type="checkbox"/>			

Assessment Task 2		Description of assessment task 2 Perform Capacitor and Inductor measurement /Test of a circuit provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for measurement of Capacitor / Inductor			
2	Performance Criteria 2: Perform measurement of Capacitor / Inductor with LCR meter			
3	Performance Criteria 3: Perform Open circuit / Short Circuit test for the Capacitor			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 Perform Open or Closed Circuit test of a Low Voltage Transformer as specified by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for the transformer test			
2	Performance Criteria 2: Perform Open circuit / Short Circuit test for the Low voltage Transformer			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 Construct rectifier circuit as per specifications provided by your assessor		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for the Rectifier circuit			
2	Performance Criteria 2: Construct half wave / Full wave rectifier circuit			
3	Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification			
4	Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio Diary log of practical work		
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 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician “Assistant Electrician”	CS Code:	Level: 02	Version: 01
Competency Standard Title: Measure Basic Electrical Units in Series and Parallel Circuits.	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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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"/> Name of the Assessor: Assessor’s code: Signature of the Assessor:.....

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician “Assistant Electrician”	CS Code:	Level: 02	Version: 01
Competency Standard Title: Measure Basic Electrical Units in Series and Parallel Circuits.	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
1. Define resistance.	Answer: Generally, the opposition in flow of current is called resistance. It is denoted by capital word R.
2. Name the meter used to measure resistance.	Answer: OHM meter is used to measure the resistance. It is operated by switching off main supply.
3. What is current? i.	Answer: The rate of flow of electrons in a specific direction is called current. It is denoted by I.
4. What do you know about voltage?	Answer: The difference of potential between two points is called voltage. OR The pressure used to move electrons in an electric circuit is called voltage.it is denoted by V.
5. How would you describe electric power?	Answer: The product of voltage and current is called electric power. OR The rate of work done is called power. It is denoted by P.
6. Which meter is used to measure electric power?	Answer: WATT meter is used to measure electric power.
7. What do you know about rectifier?	Answer: Rectifier is a device used to convert AC into DC
8. What is capacitor?	Answer: A device used to store an electric charge, consisting of one or more pairs of conductors separated by an insulator.

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician “Fabricator”	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform part fabrication Maintain tools and equipment	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
What is positive zero error in Vernier caliper?	
What is negative zero error in Vernier Caliper?	
what is least count of any instrument?	
What is calibration?	
What is spot welding?	
What is presswork?	
What is the difference between punching and piercing?	
What is die clearance in sheet metal cutting operation ?	

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Foundry Man"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform cast iron casting, aluminium die casting and centrifugal/rotary casting	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
Define mold and state the names of its different parts.	
What is the effect of clay on the properties of molding sand?	
Write the names of any four tools used in mold making.	
Define slag	
State the purpose of flux during melting operation.	
Describe cupola furnace briefly.	
State the use of thermocouple	

Question	Candidate's answer
<p>Which of the following types of cooling is used for the cooling of top and bottom dies in the low-pressure die casting?</p> <ol style="list-style-type: none">1. Water cooling2. Liquid nitrogen3. Cooling with fins4. Air jets cooling	

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Painter"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform Painting and powder coating Perform Packing and Storage	Assessment Date (DD/MM/YY):		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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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"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Title of Qualification: National Vocational Certificate Level II in Fan Manufacturing Technician "Painter"	CS Code:	Level: 02	Version: 01
Competency Standard Title: Perform Painting and powder coating Perform Packing and Storage	Assessment Date (DD/MM/YY):		

WRITTEN ASSESSMENT

Question	Candidate's answer
Describe powder coating process?	
What is undercoat?	
Why use of PPEs is important in paint shop?	
What are three main ingredients of any paint?	
Write the purpose of emery paper in painting process?	
Name at least four packing materials?	
What are the different classes of fire extinguishers?	

Question	Candidate's answer
What is inventory system?	
What is tag?	

