







FAN MANUFACTURING TECHNICIAN



ASSESSMENT PACKAGE

National Vocational Certificate Level 2

Version 1 - May, 2019





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FAN MANUFACTURING TECHNICIAN



ASSESSMENT PACKAGE
National Vocational Certificate Level 2

Version 1 - May, 2019

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

Candidate Details	Name:							
	Registration/Roll Number:							
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):							
Guidance for	 Assessment Task 1: Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor 							
Candidate	And complete:							
	 Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any) 							
	During a practical assessment, under observation by an assessor, you will complete:							
	Assessment Task 1							
	Performance Criteria 1: Check the condition of tools & equipment before use							
	Performance Criteria 2: Report for faulty tools and equipment							
	Performance Criteria 3: Ensure insulation of tools and equipment							
	Performance Criteria 4: Perform preventive maintenance as per standards							
	Performance Criteria 5: Perform corrective maintenance (If required)							
	Performance Criteria 6: Clean tools and equipment after use							
	Performance Criteria 7: Check calibration status of the measuring tools							
	Performance Criteria 8: Perform calibration of measuring tools as per standards							
	Performance Criteria 9: Record calibration test results							
	Performance Criteria 10: Place tools and equipment at appropriate place							
	Portfolios required at the time of assessment (if any) for							
	Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for maintenance of tools and equipment							
	Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for calibration of measuring instruments							

Candidate Details	Name: Candidate Signature:	Š
Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	

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

Each Assessment Task (with performance criteria)							
Assess	sment Task 1	Description of a					
		maintenance a	Arrange FIFTEEN tools/instruments, perform maintenance and calibration of TWO tools/ instrument as listed by the assessor				
During followin	the practical assessment, candidate der ng:	monstrated the	Yes	No	Remarks		
1	Performance Criteria 1: Check Physica Tools & Equipment before use	al Condition of					
2	Performance Criteria 2: Report for faul equipment	ty tools and					
3	Performance Criteria 3: Ensure insulat and equipment	ion of tools					
4	Performance Criteria 4: Perform preve maintenance as per standards	ntive					
5	Performance Criteria 5: Perform correct maintenance (If required)	ctive					
6	Performance Criteria 6: Clean Tools at after use	nd equipment					
7	Performance Criteria 7: Check calibrat the measuring tools	ion status of					
8	Performance Criteria 8: Perform calibra measuring tools as per standards	ation of					
9	Performance Criteria 9: Record Calibra results	ation test					
10	Performance Criteria 10: Place tools a at appropriate place	nd equipment					
Compe	etent 🗆	Not Yet Compe	etent 🗆				
Portfoli	io (if any)	Description of p	portfoli	O:			
-	· (·, /	The state of the s	Diary log of practical work				
Current	t ☐ Sufficient ☐ Authention	ic □ Valid			Reliable 🗆		
Portfoli	io meet the following performance stand	lards:	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 Diary log of practical work for calibration measuring instruments						
Compe	etent 🗆	Not Yet Compe	etent \Box]			

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

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

Assessment Task 3

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

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

Assessment Task 4

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

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

Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification

Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope

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

Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit

Candidate Details		Name: Registration/Roll Number:							
Assessment Outcome	Name of the As	COMPETENT Name of the Assessor: Signature of the Assessor:							
	Assessm	ent Su	mmaı			y the a	assess		
Α	ctivity			Method	t t	1		Res	sult
Nature of Activ	vity	Written	Oral	Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practical Skill	Demonstration			✓					
Knowledge As	sessment	✓	✓						
Other Require	ment				✓				
Assessment Task 1 Description of ass Measure electrica provided by your					rical po	wer par		a circuit	
During the pra following:	ctical assessment, o	candida	ite der	monstrat	ed the	Yes	No	Remarks	
	rmance Criteria 1: A ment for measureme				and				
,	rmance Criteria 2: C gement of resistance				cuit				
```	Performance Criteria 3: Construct Parallel arrangement of resistances in a closed loop circuit								
/	Performance Criteria 4: Perform measurement of Electrical resistance in a series / Parallel circuit								
<b>5</b>	Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit								
h l	Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit								
/	Performance Criteria 7: Perform measurement of AC Voltage in a series / Parallel circuit								
×	Performance Criteria 8: Perform measurement of DC Voltage in a series / Parallel circuit								
u	rmance Criteria 9: Pe ical Power for the se				of				
Competent				Not Yet	Compe	tent $\square$			

Assessment Task 2	Description of	assessr	ment ta	ask 2			
		Perform Capacitor and Inductor measurement /Test of a circuit provided by your assessor					
During the practical assessment, candidate following:	e demonstrated the	Yes	No	Remarks			
Performance Criteria 1: Arrange to equipment for measurement of Cal							
Performance Criteria 2: Perform m Capacitor / Inductor with LCR meter							
Performance Criteria 3: Perform O Circuit test for the Capacitor	pen circuit / Short						
Competent □	Not Yet Compe	etent 🗆					
	•						
Assessment Task 3		or Clos	sed Cir	ask 3 cuit test of a Low Voltage your assessor			
During the practical assessment, candidate following:	e demonstrated the	Yes	No	Remarks			
Performance Criteria 1: Arrange to equipment for the transformer test	ols, material and						
Performance Criteria 2: Perform O Circuit test for the Low voltage Tra							
Competent □	Not Yet Compe	Not Yet Competent □					
Assessment Task 4  During the practical assessment, candidate	by your assess	ifier circ		ask 4 per specifications provided			
following:	demonstrated the	Yes	No	Remarks			
Performance Criteria 1: Arrange to equipment for the Rectifier circuit	ols, material and						
Performance Criteria 2: Construct I wave rectifier circuit	half wave / Full						
Performance Criteria 3: Construct arrangement from diodes for full was							
Performance Criteria 4: Measure C rectifier with Oscilloscope	Output voltage of						
Competent	Not Yet Compe	etent 🗆					
Portfolio (if any)	Description of Diary log of pro	•					
Current ☐ Sufficient ☐ Author	entic □ Valid			Reliable			
Portfolio meet the following performance st	andards:	Yes	No	Remarks			
Performance criteria 1 for the evaluation Diary log of practical work for measurement electric units in series and parallel	suring basic						
Competent	Not Yet Comp	etent C	]	1			

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

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

#### **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

Candidate Details		Name:							
Assessment Outcome	Name of the Assignature of the	COMPETENT   Name of the Assessor:  Signature of the Assessor:							
	Assessm Activity	ent Su	mma	ry (to be Metho		by the a	assess 	or) Res	sult
	Nature of Activity		Oral	Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practical Skil	Demonstration			✓					
Knowledge A	ssessment	✓	✓						
Other Require	ement				✓				
Assessment	Task 1			Perforr		ron Ca	sting of		Part as per the r
During the pr following:	actical assessment,	candida	ite dei	monstra	ted the	Yes	No	Remarks	
	ormance Criteria 1: E Iding sand as per req			sition of					
2 Perfo	ormance Criteria 2: M ern	lake mo	ould a	s per pro	ovided				
	ormance Criteria 3: D irement	ry mou	ld as p	oer					
4	Performance Criteria 4: Prepare crucible furnace for melting								
	Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron								
n i	Performance Criteria 6: Perform furnace charging for melting								
	Performance Criteria 7: Remove impurities from the surface of molten cast iron								
	formance Criteria 8: Ensure required temperature nolten cast iron								
u	ormance Criteria 9: P I mould	our mo	lten m	naterial ii	n the				
11(1)	ormance Criteria 10: ned product	Remov	e extr	a materi	al from				
Competent D	]			Not Yet	Compe	etent $\square$			

Asses	ssment Task 2	Description of assessment task 2 Perform Aluminium Die Casting of One Fan Part as per the specifications provided by your assessor			
During follow	g the practical assessment, candidate der ring:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Prepare crucib melting	ole furnace for			
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 th machine	e die casting			
6	Performance Criteria 6: Pour molten a the casting machine	luminium into			
7	Performance Criteria 7: Adjust die cas parameters	ting machine			
8	Performance Criteria 8: Perform aluminium die casting				
9	Performance Criteria 9: Remove extra material from finished product				
Comp	petent	Not Yet Compe	tent 🗆		

Perform Centri				of assessment task 3 trifugal/rotary Casting of <b>One</b> Fan Part as fications provided by your assessor		
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks	
1	Performance Criteria 1: Prepare crucib melting	ole furnace for				
2	Performance Criteria 2: Arrange tools as per requirement	& equipment				
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 prehe	ating of mould				
6	Performance Criteria 6: Mounting of m casting machine	ould on rotary				
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 □ Not Yet Compe			tent 🗖			

Portfoli	o (if any)	Description of portfolio Diary log for practical work			
Curren	t □ Sufficient □ Authenti	c □ Valid	d 🗆		Reliable
Portfolio meet the following performance standards:				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 evaluati Diary log of practical work for aluminiu				
3	Performance criteria 3 for the evaluation of portfolio: Diary log of practical work for Centrifugal/rotary casting				
Compe	etent	Not Yet Comp	etent $\Box$	]	

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

Candidate Details	Name:						
	Registration/Roll Number:						
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):						
Guidance for Candidate	<ul> <li>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</li> <li>16. Assessment Task 2: Maintain and use appropriate firefighting equipment at place designated by your assessor</li> <li>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</li> <li>And complete:</li> <li>18. Knowledge assessment test (Written or Oral)</li> <li>19. Portfolios at the time of assessment (if any)</li> </ul>						
	During a practical assessment, under observation by an assessor, you will complete:						
	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						
	Assessment Task 2						
	Performance Criteria 1: Check expiry of fire extinguisher						
	Performance Criteria 2: Operate fire extinguisher						
	Performance Criteria 3: Replace fire extinguisher						
	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						
	Portfolios required at the time of assessment (if any) for Not Required						

Candidate Details	Name:								
Assessment Outcome	COMPETENT  Name of the Assessor: Signature of the Assessor:					. Asses	ssor's c		
Activ	Assessm	ent Su	mmai	ry (to be Method		by the a	assess	or) Res	erilt
Activ	, ity				<u> </u>				
Nature of Activity		Written	Oral	Observation	Portfolio	Role Play		Competent	Not Yet Competent
Practical Skill Der	monstration			✓					
Knowledge Asses	ssment	✓	✓						
Other Requirement	nt								
Assessment Task	<b>C</b> 1			designa	n packir ated spa ccordin	ng of <b>S</b> e	even Fa	ans and pla	el path at that
During the practic following:	cal assessment, c	andida	ite der	monstrat	ed the	Yes	No	Remarks	
1 Performa per SOP.	nce Criteria 1: Ai	range	packir	ng mater	ial as				
2 Performa packing t		terpret	warni	warning signs on					
3	nce Criteria 3: Pl oox as per standa		ermos	-core in a	a				
4 Performa industry s	nce Criteria 4: Pa standard	ack fan	and i	ts parts a	as per				
5 Performance Criteria 5: Maintain taggir store				ng syster	m at				
6 Performance Criteria 6: Follow instruct packing box				ions give	en on				
Performance Criteria 7: Store fans at place as per instructions			ns at a	ppropria	te				
8 Performal layout	ance Criteria 8: In	terpret	SOPs	of store					
9 Performa	nce Criteria 9: Fo	ollow S	OPs c	of store la	ayout				
10 Performa per SOP	ance Criteria 10: A	Adopt n	nateria	al handlir	ng as				
Competent				Not Yet	Compe	tent $\square$			

Assess	sment Task 2	Description of assessment task 2 Maintain and use appropriate firefighting equipment at place designated by your assessor			
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Check expiry of extinguisher	of fire			
2	Performance Criteria 2: Operate fire ex	ktinguisher			
3	Performance Criteria 3: Replace fire ex	xtinguish			
Compe	etent	Not Yet Compe	tent 🗆		
_					
Assess	sment 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 followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Prepare list of items				
	-				
2	Performance Criteria 2: Arrange items inventory list	as per			
3		· 			

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

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

Candidate Details	Name:								
Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:					Asses	ssor's c		
	Assessm	ent Su	mmar	v (to be	filled	ov the a	25555	eor)	
Acti		.Circ Oc.		Method		<i>J</i> y 1110 3	199000		sult
Nature of Activity		Written	Oral	Observation	Portfolio	Role Play			Not Yet Competent
Practical Skill De	monstration			<b>√</b>		_			
Knowledge Asse	ssment	✓	✓						
Other Requireme	ent				✓				
Assessment Tas	k 1			Descrip Powder provide	r coat O	NE fan	body a	ask 1 and three Fa	an blades
During the praction following:	ical assessment, c	candida	te dem	nonstrate	ed the	Yes	No	Remarks	
1 Performa	ance Criteria 1: St	tart exh	aust s	ystem					
9	ance Criteria 2: Ei as per standard	nsure e	nviron	mental					
	ance Criteria 3: Ai der coating	rrange 1	tools a	nd equip	oment				
<b>.</b> /I	ance Criteria 4: M ssor and filter unit		ince of	air					
5 Performa	ance Criteria 5: Pl	lace pa	rts in s	pray bo	oth				
	Performance Criteria 6: Operating of powder coating machine								
Performance Criteria 7: Spray powder on pa				on parts	for				
8 Performation oven for	ance Criteria 8: Ba	ake coa	ated pa	arts in th	е				
9 Performa	ance Criteria 9: Cl	leaning	of spr	ay booth	n			]	
Competent			r	Not Yet	Compe	etent 🗆			

Assess	sment Task 2	Description of a Paint ONE fan your assessor			sk 2 e Fan blades provided by
During followin	the practical assessment, candidate de ng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Remove dust	from fan parts			
2	Performance Criteria 2: Clean parts wi chemicals	ith required			
3	Performance Criteria 3: Perform buffin surface	g for smooth			
4	Performance Criteria 4: Select paint ar per requirement	nd material as			
5	Performance Criteria 5: Mix paint and SOP.	material as per			
6	Performance Criteria 6: Test paint con	nposition			
7	Performance Criteria 7: Arrange tools as per requirement for paint	and equipment			
8	Performance Criteria 8: Apply filler (fill required	ing material) if			
9	Performance Criteria 9: Spray paint or	n fan parts			
10	Performance Criteria 10: Dry painted p	oarts as per			
Compe	etent 🗆	Not Yet Compe	tent $\square$		
Portfoli	io (if any)	oortfolio actical			
Curren	t ☐ Sufficient ☐ Authenti	c □ Valid			Reliable 🛘
Portfoli	io meet the following performance stand	lards:	Yes	No	Remarks
	Performance criteria 1 for the evaluation	on of portfolio:			

Not Yet Competent □

Diary log of practical work for performing powder coating of Fan Parts

2

Competent □

Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts

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

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

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

Candidate Details	Name:  Candidate Signature:	Š
Assessment Outcome	COMPETENT   Name of the Assessor:  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				<b>✓</b>				

Assess	sment Task 1	assessment task 1 Complete Fan Blade as per specification our assessor			
During followin	the practical assessment, candidate dering:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Mount the cutt and cavity) on press machine as per do				
2	Performance Criteria 2: Select gauge of sheet for blade and shank	of the metallic			
3	Performance Criteria 3: Feed and cut t sheet as per design	he metallic			
4	Performance Criteria 4: Mount punchin and cavity) on the press machine	ng die (punch			
5	Performance Criteria 5: Adjust the presblade and shank punching	ss machine for			
6	Performance Criteria 6: Feed blade an punching holes	d shank for			
7	Performance Criteria 7: Select bending design	g die set as per			
8	Performance Criteria 8: Mount die set machine for blade and shank bending	with the			
9	Performance Criteria 9: Load and bendand shank as per standard	d the blade			
10	Performance Criteria 10: Select rivets a size	as per hole			
11	Performance Criteria 11: Insert rivet in place it on the jig				
12	Performance Criteria 12: Place the bla perform riveting	de and			
Compe	etent 🗆	Not Yet Compe	tent 🗖		

Asse	essment Task 2	Prepare One F	n of assessment task 2 One Fan Stator and One set of punched rotor 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					
Performance Criteria 5: .Perform binding and riveting of stator						
Com	petent $\square$	Not Yet Compe	tent 🗆			

Assess	sment Task 3	•	assessment task 3 safeguard for fan as per specification		
		ur asse			
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 machin	e as per length			
3	Performance Criteria 3: Load wire into	the machine			
4	Performance Criteria 4: Cut sample an	d inspect			
5	Performance Criteria 5: Select die accidesign	ording to			
6	Performance Criteria 6: Perform bendi requirement	ng as per			
7	Performance Criteria 7: Select jig as pe	er design			
8	Performance Criteria 8: Insert wires in perform welding work	to jig and			
Compe	etent	Not Yet Compe	tent 🗆		
Assess	sment Task 4	Description of a Perform pressi your assessor			ask 4 armature plate provided by
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Select armatur per size	re and axle as			
2	Performance Criteria 2: Place and adjunydraulic press	ust jig on			
3	Performance Criteria 3: Load armature	on the jig			
4	Performance Criteria 4: Insert axle in a press	armature and			
Compe	etent	Not Yet Compe	tent 🗆		
Portfoli	o (if any)	Description of Diary log for pr			
Curren	t ☐ Sufficient ☐ Authentic	c □ Valid			Reliable
Portfoli	o meet the following performance stand	ards:	Yes	No	Remarks
	Performance criteria 1: Diary log of pra				
1	different fabrication processes on Fan				
Compe	etent 🗆	Not Yet Compe	etent $\square$	]	

Title of Qualification:	CS Code:	Level:		Version:
National Vocational Certificate Level <b>II</b> in Fan Manufacturing Technician "Fabricator"		02		01
0 1 1 1 7 1 1	Assessment Date		Assessment Time	
Competency Standard Title:		ate	Asses	sment Time
Perform part fabrication	Assessment D (DD/MM/YY):	ate	<b>Assess</b> 04:00 H	
•		ate		

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

Candidate Details	Name:  Candidate Signature:	Š
Assessment Outcome	COMPETENT   Name of the Assessor:  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				<b>✓</b>				

Each A	Each Assessment Task (with performance criteria)						
			EN too	ols/instru bration	sk 1 uments, perform of TWO tools/ instrument		
During followin	the practical assessment, candidate der	monstrated the	Yes	No	Remarks		
1	Performance Criteria 1: Check the con & equipment before use	dition of tools					
2	Performance Criteria 2: Report for faul equipment	ty tools and					
3	Performance Criteria 3: Ensure insulation and equipment	ion of tools					
4	Performance Criteria 4: Perform preve maintenance as per standards	ntive					
5	Performance Criteria 5: Perform correct maintenance (If required)	ctive					
6	Performance Criteria 6: Clean tools an after use	d equipment					
7	Performance Criteria 7: Check calibrati the measuring tools	ion status of					
8	Performance Criteria 8: Perform calibra measuring tools as per standards	ation of					
9	Performance Criteria 9: Record calibration test results						
10	Performance Criteria 10: Place tools at appropriate place	nd equipment					
Compe	etent 🗆	Not Yet Compe	tent 🗆				
Assess	sment Task 2	Description of assessment task 2 Prepare One Fan Stator and One set of punched rotor					

Asses		•	an Sta	tor and	ask 2 One set of punched rotor provided by your assessor
During followi	g the practical assessment, candidate deming:	onstrated the	Yes	No	Remarks
1	Performance Criteria 1: Select cutting di requirement	e as per			
2	Performance Criteria 2: Mount cutting di press machine	e on the			
3	Performance Criteria 3: Feed and cut metal sheet as per design				
4	Performance Criteria 4: Perform punchir requirement for punching slots in stator a sheets				
5	Performance Criteria 5: .Perform binding of stator	g and riveting			-
Competent □ N		Not Yet Compe	tent $\square$		

Portfolio (if any)			Description of Diary Log of p	•			
Current ☐ Sufficient ☐ Authentic ☐ \				c □ Valid			Reliable 🗆
Portfolio meet the following performance standard			ards:	Yes	No	Remarks	
Performance criteria 1: Diary log of practical work for different fabrication processes on Fan Parts							
Competent □ No			Not Yet Comp	etent $\Box$	l		

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

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

#### **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

Candidate Details		Name:							
Assessment Outcome	Name of the As	COMPETENT   Name of the Assessor:  Signature of the Assessor:					ssor's c		
Δ	Assessm	ent Su	mma	ry (to be Metho		by the a	assess 		sult
	Activity  Nature of Activity			Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practical Skill	Demonstration			✓					
Knowledge As	ssessment	✓	✓						
Other Require	ement				✓				
Assessment ⁻	Гask 1			Perforr		ron Ca	sting of		Part as per the r
During the pra following:	actical assessment, o	candida	ite dei	monstra	ted the	Yes	No	Remarks	
	ormance Criteria 1: E ding sand as per req			sition of					
2 Perfo	ormance Criteria 2: M rn	ake mo	ould a	s per pro	ovided				
	ormance Criteria 3: D rement	ry mou	ld as p	oer					
4	Performance Criteria 4: Prepare crucible furnace for melting				ce for				
Performance Criteria 5: Arrange tools & equipment as per requirement for melting of cast iron									
6 Performance Criteria 6: Perform furnace charging for melting									
Performance Criteria 7: Remove impurities from the surface of molten cast iron									
Performance Criteria 8: Ensure required temperature of molten cast iron									
Performance Criteria 9: Pour molten material in the sand mould									
1()	rmance Criteria 10: l ed product	Remov	e extr	a materi	al from				
Competent E	]			Not Yet	Compe	etent $\Box$			

Perfo			nium Di		sk 2 ng of One Fan Part as per / your assessor
During followin	the practical assessment, candidate der ng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Prepare crucib melting	le furnace for			
2	Performance Criteria 2: Arrange tools as per requirement	& equipment			
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 finished product	material from			
Compe	etent	Not Yet Compe	tent 🗖		

Assessment Task 3 Description of					
					asting of <b>One</b> Fan Part as ed by your assessor
per the spee				provide	i assessor
During followin	the practical assessment, candidate de g:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Prepare crucili melting	ole furnace for			
2	Performance Criteria 2: Arrange tools as per requirement	& equipment			
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				
Compe	Competent ☐ Not Yet Compe		tent 🛘		

Portfoli	o (if any)	Description of point of property log for			
Curren	t ☐ Sufficient ☐ Authention	c □ Valid			Reliable 🗆
Portfolio meet the following performance standards:				No	Remarks
1	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					
Compe	etent	Not Yet Compe	etent 🗆		

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 I (DD/MM/YY):	Date	Asses 4 Hour	sment Time:

Candidate Details	Name:
	Registration/Roll Number:
	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):
Guidance for Candidate	<ul> <li>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</li> <li>40. Assessment Task 2: Powder coat ONE fan body and three Fan blades provided by your assessor</li> <li>41. Assessment Task 3: Paint ONE fan body and three Fan blades provided by your assessor</li> </ul>
	And complete:
	42. Knowledge assessment test (Written or Oral) 43. Portfolios at the time of assessment (if any)
	During a practical assessment, under observation by an assessor, you will complete:
	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 thermo-pore 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
	Assessment Task 2
	Performance Criteria 1: Start exhaust system
	Performance Criteria 2: Ensure environmental concern as per standard
	Performance Criteria 3: Arrange tools and equipment for powder coating
	Performance Criteria 4: Maintenance of air compressor and filter unit
	Performance Criteria 5: Place parts in spray booth
	Performance Criteria 6: Operating of powder coating machine
	Performance Criteria 7: Spray powder on parts for coating
	Performance Criteria 8: Bake coated parts in the oven for curing
	Performance Criteria 9: Cleaning of spray booth

#### **Assessment Task 3**

Performance Criteria 1: Remove dust from fan parts

Performance Criteria 2: Clean parts with required chemicals

Performance Criteria 3: Perform buffing for smooth surface

Performance Criteria 4: Select paint and material as per requirement

Performance Criteria 5: Mix paint and material as per SOP.

Performance Criteria 6: Test paint composition

Performance Criteria 7: Arrange tools and equipment as per requirement for paint

Performance Criteria 8: Apply filler (filling material) if required

Performance Criteria 9: Spray paint on fan parts

Performance Criteria 10: Dry painted parts as per SOP

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

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

performing powder coating of Fan Parts

Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts

Continued on following page

Candidate Details	Name:  Candidate Signature:	Š
Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:	

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

Each Assessment Task (with performance criteria)								
Assess	sment 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 following	the practical assessment, candidate de ng:	monstrated the	Yes	No	Remarks			
1	Performance Criteria 1: Arrange packi per SOP.	ng material as						
2	Performance Criteria 2: Interpret warn packing box							
3	Performance Criteria 3: Place thermopacking box as per standard							
4	Performance Criteria 4: Pack fan and industry standard							
5	Performance Criteria 5: Maintain taggi store	ng system at						
6	Performance Criteria 6: Follow instruction	tions given on						
7	Performance Criteria 7: Store fans at a place as per instructions	appropriate						
8	Performance Criteria 8: Interpret SOP							
9	Performance Criteria 9: Follow SOPs of store layout				]			
10	Performance Criteria 10: Adopt materi per SOP							
Compe	etent	Not Yet Compe	tent 🗖					

Assess	sment Task 2	Description of Powder coat C provided by yo	NE far	body a	isk 2 and three Fan blades
During the practical assessment, candidate demonstrated the following:				No	Remarks
1	Performance Criteria 1: Start exhaust	system			
2	Performance Criteria 2: Ensure enviror concern as per standard	nmental			
3	Performance Criteria 3: Arrange tools 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 p machine	owder coating			
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 □ Not Yet Compe			etent 🗆		

Assess	sment Task 3	Description of Paint ONE fan your assessor			sk 3 e Fan blades provided by
During followir	the practical assessment, candidate de ng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Remove dust	from fan parts			
2	Performance Criteria 2: Clean parts wi chemicals	th required			
3	Performance Criteria 3: Perform buffin surface	g for smooth			
4	Performance Criteria 4: Select paint and material as per requirement				
5	Performance Criteria 5: Mix paint and SOP.	material as per			
6	Performance Criteria 6: Test paint con	nposition			
7	Performance Criteria 7: Arrange tools as per requirement for paint	and equipment			
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 ☐ Not Yet Compe			tent 🗆		

Portfolio (if any)				Descript Diary log				
Curren	t 🗆 🤫	Sufficient 🗆	Authentio		Valid			Reliable 🗆
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							
Performance criteria 2 for the evaluation of portfolio: Diary log of practical work for performing Paint to Fan Parts								
Compe	etent 🗆			Not Yet	Compe	etent $\square$		

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

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

#### **Assessment Task 3**

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

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

#### **Assessment Task 4**

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

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

Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification

Performance Criteria 4: Measure Output voltage of rectifier with Oscilloscope

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

Performance criteria 1 for the evaluation of portfolio: Diary log of practical work for measuring basic electric units in series and parallel circuit

Continued on following page

Candidate Details		Name:							
Assessment Outcome	Name of the As	COMPETENT   Name of the Assessor:  Signature of the Assessor:							
	Assessm	ent Su	mmar			y the a	assess		
Acti	ivity			Method	<u> </u>			Res	sult
Nature of Activity	ature of Activity			Observation	Portfolio	Role Play		Competent	Not Yet Competent
Practical Skill De	monstration			✓					
Knowledge Asse	ssment	✓	✓						
Other Requireme	ent				✓				
Assessment Task 1  Description of assessment task 1  Measure electrical power parameters of a circuit provided by your assessor						a circuit			
During the practi following:	ical assessment, c	andida	ite der	nonstrate	ed the	Yes	No	Remarks	
	ance Criteria 1: Ai ent for measureme				and				
/	ance Criteria 2: Coment of resistance				cuit				
٠,	ance Criteria 3: Coment of resistance				cuit				
//	ance Criteria 4: Pe al resistance in a s								
<b>5</b>	Performance Criteria 5: Perform measurement of Alternating current in a series / Parallel circuit								
Performance Criteria 6: Perform measurement of Direct Current in a series / Parallel circuit									
Performance Criteria 7: Perform measurement of Voltage in a series / Parallel circuit					of AC				
×	ance Criteria 8: Pe in a series / Paral			urement	of DC				
u	ance Criteria 9: Pe al Power for the se				of				
Competent □				Not Yet	Compe	etent 🗆			

Assess	sment Task 2	Description of a Perform Capacicit provided	citor and	d Induc	tor measurement /Test of a
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, equipment for measurement of Capaci				
2	Performance Criteria 2: Perform meas Capacitor / Inductor with LCR meter	surement of			
3	Performance Criteria 3: Perform Open Circuit test for the Capacitor	circuit / Short			
Compe	etent 🗆	Not Yet Compe	tent 🗆		
Assess	sment Task 3	Description of a Perform Open Transformer as	or Clos	ed Circ	uit test of a Low Voltage
During the practical assessment, candidate demonstrated the following:				No	Remarks
1	Performance Criteria 1: Arrange tools, equipment for the transformer test				
2	Performance Criteria 2: Perform Open Circuit test for the Low voltage Transfo				
Compe	etent 🗆	Not Yet Compe	tent 🗆		
Assess	sment Task 4	Description of a Construct recti by your assess	fier circ		sk 4 er specifications provided
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1: Arrange tools, material and equipment for the Rectifier circuit				
2	Performance Criteria 2: Construct half wave rectifier circuit				
3	Performance Criteria 3: Construct bridge arrangement from diodes for full wave rectification				
4	Performance Criteria 4: Measure Outp rectifier with Oscilloscope	ut voltage of			
Compe	etent 🗆	Not Yet Compe	tent 🗆		

`				Descrip Diary lo				
Current ☐ Sufficient ☐ Authentic				Valid			Reliable 🗆	
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 □			Not Yet	Compe	etent 🗆			

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 D	  Pate (DD/MM/YY	<b>)</b> :

Guidance	To complete your assessment for this Competency Standard, you need to
for	answer the questions on the following pages successfully.
Candidate	

Candidate Details	Name:  Candidate Signature:	
Written Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:	NOT YET COMPETENT  Assessor's code:

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.	Assessmen	t Date (DD/M	M/YY):

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.	<b>Answer</b> : OHM meter is used to measure the resistance. It is operated by switching off main supply.
3.	What is current?	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:	CS Code:	Level:	Version:
National Vocational Certificate Level II in Fan Manufacturing Technician "Fabricator"		02	01
Compatancy Standard Title.	Accessment F	oto /DD/MM/VV	٧.
Competency Standard Title:	Assessment L	ate (DD/MM/YY	) <del>.</del>
Perform part fabrication	Assessment L	rate (DD/IVIIVI/11	):
	Assessment L	vate (DD/MIW/TT	).

Guidance	To complete your assessment for this Competency Standard, you need to
for	answer the questions on the following pages successfully.
Candidate	

Candidate Details	Name:  Candidate Signature:	Registration/Roll Number:
Written Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:	NOT YET COMPETENT  Assessor's code:

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

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

Guidance	To complete your assessment for this Competency Standard, you need to
for	answer the questions on the following pages successfully.
Candidate	

Candidate Details	Name:  Candidate Signature:	Registration/Roll Number:
Written Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:	NOT YET COMPETENT  Assessor's code:

Title of Qualification:	CS Code:	Level:	Version:
National Vocational Certificate Level II in Fan Manufacturing Technician "Foundry Man"		02	01
	Assessment Date (DD/MM/YY):		
Competency Standard Title:	Assessmen	t Date (DD/M	M/YY):

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
Which of the following types of cooling is used for the cooling of top and bottom dies in the low-pressure die casting?	
Water cooling	
Liquid nitrogen	
3. Cooling with fins	
4. 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 D	Pate (DD/MM/YY	):

Guidance for	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
Candidate	

Candidate Details	Name:  Candidate Signature:	· ·
Written Assessment Outcome	COMPETENT   Name of the Assessor:  Signature of the Assessor:	NOT YET COMPETENT  Assessor's code:

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

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?	

Candidate's answer

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