







ELECTRICAL MACHINE WINDING TECHNICIAN



ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - September, 2018





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Document Version September, 2018 **Islamabad, Pakistan**

ELECTRICAL MACHINE WINDING TECHNICIAN



ASSESSMENT PACKAGE
National Vocational Certificate Level 4

Version 1 - September, 2018

This formative assessment relates to the training programme:	CS Code:	Level: 4	Version:
Electrical Machine Winding Technician			
	4 -	/DD /3434 0//	Λ.
Module Title:	Assessment D	pate (DD/MINI/Y Y):

Candidate Details	Name:
	Registration/Roll Number:
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):
	Assessment Task 1. Contribute to initiate work-related health and safety measures
Guidance for	Assessment Task 2. Contribute to establish work-related health and safety measures
Candidate	Assessment Task 3. Contribute to ensure legal requirements of WHS measures Assessment Task 4. Contribute to review WHS measures Evaluate the organization's WHS system
	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:
	Performance Criteria 2:
	Performance Criteria 3: Performance Criteria 4:
	Performance Criteria 5:
	Performance Criteria 6:
Minimum Evidence	Assessment Task 2
Required	Performance Criteria 1:
	Performance Criteria 2: Performance Criteria 3:
	Performance Criteria 4:
	Performance Criteria 5:
	Assessment Task 3
	Performance Criteria 1:
	Performance Criteria 2: Performance Criteria 3:
	Performance Criteria 4:
	Performance Criteria 5:

Portfolios required at the time of assessment (if any) like trainees assignment, Project job etc:
Performance criteria 1 for the evaluation of portfolio
Performance criteria 2 for the evaluation of portfolio
Performance criteria 3 for the evaluation of portfolio

Candidate Details	Name:								
Assessment Outcome	COMPETENT☐ Name of the Assessor: Signature of the Assessor: Assessor:								
	A	ant Cu		, /ta ha	filled b	4b o 4			
Acti	Assessm	ent Su		/ (to be Method		by the a	assess		sult
Nature of Activity					Not Yet Competent				
Practical Skill Demonstration				√		✓			
Knowledge Asse	ssment	✓	✓						
Other Requireme	ent				✓				
		•	•	•			•		
Each Assessme	nt Task (with perfo	ormano	e criter	ia)					
Assessment Task (with performance criteria) Assessment Task 1 : Contribute to initiate work-related health and safety measures Description of assessment task 1									
During the practical assessment, candidate demonstrated the following:			ed the	Yes	No	Remarks			
1 Performance criteria1:									
2 Performance criteria2:									
3 Performance criteria3:							1		
4 Performance criteria4:									
5 Perform	ance criteria5								
6 Perform	ance criteria6:								
Competent				Not Yet	Compe	etent \square	•		

Each Assessment Task (with performance criteria)					
Assess	sment Task 2 : Contribute to	Description of assessment task 2			
establi	ish work-related health and safety				
measu	ires				
			ı	ı	1
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				1
3	Performance criteria3:				1
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent 🗆	Not Yet Compe	tent 🗆	•	
	Assessment Task (with performance critic				
	sment Task 3 : Contribute to ensure	Description of	assess	ment ta	ask 3
iegai r	equirements of WHS measures				
During followir	the practical assessment, candidate de	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				1
4	Douformon on a cuitorio 4.				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent \square	Not Yet Compe	tent Π		1

Each A	ssessment Task (with performance crit	eria)			
Assessment Task 4 Contribute to review Description			on of assessment task 4:		
WHS measures					
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				-
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent	Not Yet Compe	etent 🗆		
Each A	ssessment Task (with performance crit	eria)			
	ment Task 5 : Evaluate the	Description of assessment task 5:			
organi	zation's WHS system				
During the practical assessment, candidate demonstrated th following:		monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent 🗆	Not Yet Compe	etent \square		

Portfoli	io(if any)			Descrip	tion of	portfolio)	
Current	ıt□	Sufficient□	Authentio	c 🗆	Valid			Reliable
Portfoli	io meet th	e following perforn	nance stand	ards:		Yes	No	Remarks
1	Performance criteria 1							
2 Performance criteria 2								
3 Performance criteria 3								
4								
Compe	etent 🗆			Not Yet	Compe	etent \square		

Assessors Judgment Guide TITLE OF QUALIFICATION

(Formative Assessment)

This formative assessment relates to the training programme:			: 4	Version:
chine Winding Technician				
		t Date (D	D/MM/YY)	:
Work Related Fleatill and Salety				
			le, you ne	ed to answer
	essor and signed b	oth by the	e assessor	and the
Candidate Name:				
Details Candidate Signature:				
COMPETENT□	١	NOT YET	COMPETE	ENT□
Name of the Assessor:	A	Assessor's	s code:	
Signature of the Assessor:				
		0.0.1		
	aining	S Code:	Level:4	Version:
chine Winding Technician				
Module Title: Contribute to Work Related Health and Safety (WHS			nt Date (D	D/MM/YY):
	chine Winding Technician Work Related Health and Safety To complete your assessmenthe questions on the following the questions on the following the assessment) Name: Candidate Signature: COMPETENT Name of the Assessor: Signature of the Assessor: ve assessment relates to the trackine Winding Technician	Assessment Work Related Health and Safety To complete your assessment for this Curriculus the questions on the following pages successful the questions on the following pages successful the assessment) Name: Candidate Signature: COMPETENT Name of the Assessor: Signature of the Assessor: Signature of the Assessor: Verange assessment relates to the training Chine Winding Technician	To complete your assessment for this Curriculum Modu the questions on the following pages successfully. Lide (to be completed by the Assessor and signed both by the rather assessment) Name: Registration Candidate Signature: NOT YET Name of the Assessor: Assessor's Signature of the Assessor: CS CS Code: Chine Winding Technician	To complete your assessment for this Curriculum Module, you need the questions on the following pages successfully. In the questions on the questions on the following pages successfully. In the questions on the questions on the following pages successfully. In the questions of the questions

Page | 7

WRITTEN ASSESSMENT

Question	Candidate's answer
1.	
2.	
۷.	
3.	
4.	
4.	
5.	
6.	
0.	
7.	

This formative assessment relates to the training programme:	CS Code:	Level: 4	Version:
Electrical Machine Winding Technician			
Module Title: Analyse Workplace policy and procedure	Assessment D	ate (DD/MM/YY) :

Candidate Details	Name:					
	Registration/Roll Number:					
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):					
	Assessment Task 1. Manage work timeframes					
	Assessment Task 2. Manage to convene meeting Assessment Task 3. Decision making at workplace					
Guidance for	Assessment Task 4. Set and meet own work priorities at instent					
Candidate	Assessment Task 5. Develop and maintain professional competence Follow and implement work safety requirements					
	And complete:					
	3. Knowledge assessment test (Written or Oral)					
	4. 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:					
	Performance Criteria 2:					
	Performance Criteria 3: Performance Criteria 4:					
	Performance Criteria 5:					
	Performance Criteria 6:					
Minimum Evidence	Assessment Task 2					
Required	Performance Criteria 1:					
·	Performance Criteria 2:					
	Performance Criteria 3: Performance Criteria 4:					
	Performance Criteria 5:					
	Assessment Task 3					
	Performance Criteria 1:					
	Performance Criteria 2:					
	Performance Criteria 3: Performance Criteria 4:					
	Performance Criteria 5:					

Portfolios required at the time of assessment (if any) like trainees assignment, Projects/ Jobs etc:
Performance criteria 1 for the evaluation of portfolio
Performance criteria 2 for the evaluation of portfolio
Performance criteria 3 for the evaluation of portfolio

Candidate Details		Name:Registration/Roll Number:								
Assessment Outcome	Signature of the	me of the Assessor: Assessor's code:								
	A	1 O		. (1 - 1 -	£:11 a al 1	41				
Activ	Assessm	ent Su	mmary	y (to be Method		by the a	assess		sult	
ACII	/ity				л 				<u> </u>	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play		Competent	Not Yet Competent		
Practical Skill Der	nonstration			✓		✓				
Knowledge Asses	ssment	✓	✓							
Other Requireme	nt				✓					
			•				•		1	
Each Assessmen	t Task (with perfo	ormanc	e criter	ia)						
Assessment Task timeframes				Descrip	otion of	assess	ment ta	ask 1		
During the practic following:	cal assessment, o	candida	ite dem	nonstrat	ed the	Yes	No	Remarks		
1 Performa	nce criteria1:									
2 Performa	ance criteria2:									
3 Performa	nce criteria3:							_		
4 Performa	nce criteria4:									
5 Performa	nce criteria5									
6 Performa	ance criteria6:									
Competent □				Not Yet	Compe	tent \square		•		

Each A	ssessment Task (with performance crit	eria)					
Assess meetin	ment Task 2 : Manage to convene	Description of assessment task 2:					
During followin	the practical assessment, candidate de	monstrated the	Yes	No	Remarks		
1	Performance criteria1:						
2	Performance criteria2:						
3	Performance criteria3:						
4	Performance criteria4:						
5	Performance criteria5						
6	Performance criteria6:						
Compe	etent	Not Yet Compe	Not Yet Competent □				
	ssessment Task (with performance crit	eria)					
Assess workpl	sment Task 3: Decision making at lace	Description of	assess	ment ta	sk 3:		
•							
During followin	the practical assessment, candidate de	monstrated the	Yes	No	Remarks		
1	Performance criteria1:						
2	Performance criteria2:						
3	Performance criteria3:						
4	Performance criteria4:						
5	Performance criteria5						
6	Performance criteria6:						
Compe	etent \square	Not Yet Compe	tent 🗆				

Each A	ssessment Task (with performance crite	eria)			
	ment Task 4: Set and meet own priorities at instent	Description of	assess	ment ta	ask 4:
During followir	the practical assessment, candidate de	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent	Not Yet Compe	etent \square		
Assess profes		Description of	assess	ment ta	ask 5:
During followir	the practical assessment, candidate de	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent	Not Yet Compe	tent 🗆		

E	ach A	Assessment Task (with	performanc	e crite	eria)					
		sment Task 6: Follow a safety requirements	ınd implem	ent	Description	on of a	ssessr	nent ta	sk 6:	
	Ouring ollowi	the practical assessments:	ent, candida	te de	monstrated	I the	Yes	No	Remarks	
1		Performance criteria1	:							
2)	Performance criteria2):							
3	3	Performance criteria3	3:							
4		Performance criteria4	k:							
5	5 Performance criteria5									
6	6 Performance criteria6:									
C	Comp	etent 🗆			Not Yet C	ompet	ent \square		,	
Portfol	io(if a	ny)		Des	cription of p	oortfoli	0			
	`	•,								
Curren	nt□	Sufficient□	Authentio		Valid			Relia	ble □	
Portfol	io me	et the following perform	ance stand	ards:		Yes	No	Ren	narks	
	Per	formance criteria 1								
2	Per	formance criteria 2								
3	Per	formance criteria 3								
1										
Compe	etent			Not	Yet Compe	etent C]	•		

Assessors Judgment Guide TITLE OF QUALIFICATION

training pro	gram	ssessment relates to the ame: Winding Technician	CS Code	: Le	vel: 4	V	ersion:
Module Title Analyse Wor	e policy and procedure	Assessment Date (DD/MM/YY):					
Guidance for Candidate		complete your assessment for questions on the following pag			dule, you	need	d to answer
Assessors Go candidate afte		(to be completed by the Assessor assessment)	· and signe	d both by	the asses	sor a	nd the
Candidate Details Name: Candidate Signature:							
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:		Assess				
programme:	:	ssessment relates to the trainin Winding Technician	g	CS Code	e: Level:	4	Version:
Module Title Analyse Wor	e policy and procedure		Assessr	nent Date	(DD	/MM/YY):	

WRITTEN ASSESSMENT

Question	Candidate's answer
8.	
9.	
40	
10.	
11.	
12.	
13.	
14.	

This formative assessment relates to the training programme: Electrical Machine Winding Technician	CS Code:	Level: 4	Version:
Module Title: Perform Advanced Communication	Assessment D	Pate (DD/MM/YY):

Candidate Details	Name:						
	Registration/Roll Number:						
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):						
Guidance	Assessment Task 1. Demonstrate professional skills						
for Candidate	Assessment Task 2. Plan and Organize work Assessment Task 3. Provide trainings at workplace						
	And complete:						
	5. Knowledge assessment test (Written or Oral)6. 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:						
	Performance Criteria 2: Performance Criteria 3:						
	Performance Criteria 4:						
	Performance Criteria 5: Performance Criteria 6:						
	renomance Chiena 6.						
Minimum Evidence	Assessment Task 2						
Required	Performance Criteria 1:						
	Performance Criteria 2: Performance Criteria 3:						
	Performance Criteria 4:						
	Performance Criteria 5:						
	Assessment Task 3						
	Performance Criteria 1: Performance Criteria 2:						
	Performance Criteria 2:						
	Performance Criteria 4:						
	Performance Criteria 5:						

Portfolios required at the time of assessment (if any) like trainees assignment, Projects/Jobs etc:
Performance criteria 1 for the evaluation of portfolio
Performance criteria 2 for the evaluation of portfolio
Performance criteria 3 for the evaluation of portfolio

Candida Details	ate		lame:Registration/Roll Number:							
Assess Outcom		Name of the As	COMPETENT Name of the Assessor: Signature of the Assessor:					ssor's c		
		A5565501								
		Assessm	ent Su	mmaı	v (to be	filled b	ov the a	assess	sor)	
	Activ				Method		,			sult
Nature of Activity				Observation	Portfolio	Role Play		Competent	Not Yet Competent	
Practical Skill Demonstration					√		✓			
Knowle	Knowledge Assessment ✓ ✓									
Other R	Requireme	nt				✓				
					•					
Each A	ssessmen	t Task (with perfo	ormanc	e crite	eria)					
Assess	ment Ta	ask 1 : D	emons	trate	Descrip	tion of	assess	ment ta	ask 1	
profes	sional ski	lls								
D ::	d			t. I.						
following		cal assessment, o	andida	ite der	nonstrat	ea the	Yes	No	Remarks	
1	Performa	nce criteria1:								
2	Performa	nce criteria2:								
3	Performa	nce criteria3:								
4	Performa	nce criteria4:								
5	Performa	ince criteria5								
6	Performa	nce criteria6:								
Compe	etent \square				Not Yet	Compe	etent \square			

Each A	ssessment Task (with performance crit	eria)			
Assess	ment Task 2 : Plan and Organize	Description of	assess	ment ta	ask 2:
work					
During	the practical assessment, candidate de	monstrated the			
followin		monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent 🗆	Not Yet Compe	tent 🗆		
	ssessment Task (with performance crit	-			
	ment Task 3 : Provide trainings at	Description of	assessi	ment ta	ask 3:
workpl	lace				
During followin	the practical assessment, candidate de	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				1
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent	Not Yet Compe	tent \square		

Portfolio	o(if any)	Desc	ription of p	oortfoli)		
Current	□ Sufficient□	Authentic□	Valid			Reliable	
Portfolio	o meet the following perforn	nance standards:		Yes	No	Remarks	
1	Performance criteria 1						
2	Performance criteria 2						
3	Performance criteria 3						
4							
Compe	tent	Not Y	et Compe	etent 🗆]		
		•					

Assessors Judgment Guide TITLE OF QUALIFICATION

(Formative Assessment)

	•			
This formati training pro	ve assessment relates to the gramme:	CS Code:	Level: 4	Version:
Electrical Ma	chine Winding Technician			
Module Title: Perform Advanced Communication		Assessmen	t Date (DD/MM/	/YY):
Guidance for Candidate	To complete your assessment f the questions on the following p			ı need to answer

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

Candidate Details	Name: Candidate Signature:	<u> </u>
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT□ Assessor's code:

This formative assessment relates to the training programme:	CS Code:	Level:	Version:
Electrical Machine Winding Technician			
Module Title:	Assessme	ent Date (DD	/MM/YY):

WRITTEN ASSESSMENT

Question	Candidate's answer
15.	
16.	
17.	
18.	
19.	
19.	
20.	
21.	

This formative assessment relates to the training programme: Electrical Machine Winding Technician	CS Code:	Level: 1	Version:
Module Title: Develop Advance Computer Application Skills	Assessment D	Pate (DD/MM/YY):

Candidate Details	Name:
	Registration/Roll Number:
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):
Guidance for Candidate	Assessment Task 1. Assessment Task 2. Assessment Task 3. Assessment Task 4. Manage Information System to complete a task Prepare Presentation using computers Use Microsoft Access to manage database Develop graphics for Design
	And complete:
	7. Knowledge assessment test (Written or Oral)8. 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: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5: Performance Criteria 6:
Minimum Evidence	Assessment Task 2
Required	Performance Criteria 1: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5:
	Assessment Task 3
	Performance Criteria 1: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5:

Assessment Task 4:
Performance Criteria 1:
Performance Criteria 2:
Performance Criteria 3:
Performance Criteria 4:
Performance Criteria 5:
Portfolios required at the time of assessment (if any) like trainees assignment, Project job etc:
Performance criteria 1 for the evaluation of portfolio
Performance criteria 2 for the evaluation of portfolio
Performance criteria 3 for the evaluation of portfolio

Candidate Details	Name:								
Assessment Outcome	COMPETENT NOT YET COMPETENT Name of the Assessor: Assessor's code: Signature of the Assessor:								
	A	-m4 C		. /4a ba	f:11 a a l	41- 0			
Activ	Assessm	ent Su	mmar	y (to be Method		by the a	assess		sult
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play		Competent	Not Yet Competent	
Practical Skill De	monstration			✓		✓			
Knowledge Asses	ssment	✓	✓						
Other Requirement				✓					
Each Assessmer	nt Task (with perf	ormanc	e crite	ria)					
Assessment Tas	_	ormatio	on	Descrip	otion of	assess	ment ta	ask 1	
During the practical assessment, candidate demonstrated th following:				ed the	Yes	No	Remarks		
1 Performa	erformance criteria1:								
2 Performa	Performance criteria2:								
Performance criteria3:									
4 Performa	Performance criteria4:								
5 Performa	ance criteria5								
6 Performa	ance criteria6:								
Competent □				Not Yet	Compe	tent \square	_	_	

Each A	ssessment Task (with performance crite	eria)				
Assess	ment Task 2 : Prepare Presentation	Description of assessment task 2				
using (computers					
During followir	the practical assessment, candidate de	monstrated the	Yes	No	Remarks	
1	Performance criteria1:					
2	Performance criteria2:					
3	Performance criteria3:					
4	Performance criteria4:					
5	Performance criteria5					
6	Performance criteria6:					
Compe	etent 🗆	Not Yet Competent □				
Each A	ssessment Task (with performance crite	eria)				
Assess	ment Task 3: Use Microsoft Access	Description of assessment task 3				
to man	nage database					
During followin	the practical assessment, candidate de	monstrated the	Yes	No	Remarks	
1	Performance criteria1:					
2	Performance criteria2:					
3	Performance criteria3:				_	
4	Performance criteria4:					
5	Performance criteria5					
6	Performance criteria6:					
Compe	etent 🗆	Not Yet Compe	tent 🗆			

Each Asses	sment Task (with performance crit	eria)			
Assessment	Description of assessment task 4				
Design					
During the n	ractical assessment, candidate de	monetrated the			
following:	ractical assessment, candidate de	emonstrated the	Yes	No	Remarks
1 Per	formance criteria1:				
2 Per	formance criteria2:				
3 Per	formance criteria3:				
4 Per	formance criteria4:				
5 Per	formance criteria5				
6 Per	formance criteria6:				
Competent		Not Yet Compe	etent \square		
Portfolio(if a	ny)	Description of	portfoli	0	
Current□	Sufficient□ Authenti	⊥ ic□ Valid			Reliable
Portfolio me	et the following performance stand	dards:	Yes	No	Remarks
1 Peri	formance criteria 1				
2 Peri	formance criteria 2				
3 Peri	formance criteria 3				
4					
Competent		Not Yet Comp	etent C]	
	Assessors J TITLE OF Q (Formative A				
This format training pro	ive assessment relates to the gramme:	CS Code:	I	_evel: 1	1 Version:
Electrical Ma	achine Winding Technician				
Module Title		Assessm	ent Da	te (DD	/MM/YY):
Develop Adv			`	·	
Guidance	To complete your assessment			lodule	, you need to answer
for Candidate	the questions on the following	y payes succes	oruny.		

Candidate Details	Name: Candidate Signature:	_		
Written Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	Assessor'		
programme:	ssessment relates to the training Winding Technician	CS Code:	Level:4	Version:
Module Title: Develop Advance	Computer Application Skills	Assessme	ent Date (DD)/MM/YY):

WRITTEN ASSESSMENT

Question	Candidate's answer
22.	
23.	
04	
24.	
25.	
26.	
27.	
28.	

This formative assessment relates to the training programme:	CS Code:	Level: 4	Version:
Electrical Machine Winding Technician			
Module Title: Manage Human Resources	Assessment D	Pate (DD/MM/YY):

Candidate Details	Name:						
	Registration/Roll Number:						
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):						
Guidance for Candidate	Assessment Task 1. services Assessment Task 2. Assessment Task 3. Assessment Task 4. practices Determine strategies for delivery of human resource Manage the delivery of human resource services Evaluate human resource service delivery Manage integration of business ethics in human resource						
	And complete: 9. Knowledge assessment test (Written or Oral) 10. Portfolios at the time of assessment (if any)						
Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance Criteria 1: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5: Performance Criteria 6:						
	Performance Criteria 1: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5:						
	Assessment Task 3 Performance Criteria 1: Performance Criteria 2: Performance Criteria 3: Performance Criteria 4: Performance Criteria 5:						

As	ssessment Task 4:
Pe Pe Pe	erformance Criteria 1: erformance Criteria 2: erformance Criteria 3: erformance Criteria 4: erformance Criteria 5:
	ortfolios required at the time of assessment (if any) like trainees assignment, ojects/Jobs etc:
	Performance criteria 1 for the evaluation of portfolio
	Performance criteria 2 for the evaluation of portfolio
	Performance criteria 3 for the evaluation of portfolio
	······································

Candida Details	ate	Name:									
Accept	mont	COMPETENT					NOT YET COMPETENT□				
Assessr Outcom		Name of the Assessor: Assessor's code:									
		Signature of the Assessor:									
		Assessm	ent Su	mmar			by the a	assess 			
Activity			Method				1	Result			
Nature of Activity			Written	Oral	Observation	Portfolio	Role Play	Competent		Not Yet Competent	
Practical Skill Demonstration					√		✓				
Knowled	dge Asses	sment	✓	✓							
Other Requirement						✓					
Each As	ssessmen	t Task (with perfo	ormanc	e crite	ria)						
Assessment Task 1 : Determine strategies Description of asse				assess	ment ta	ısk 1					
for deli	very of hu	ıman resource s	service	s							
During the practical assessment, candidate demonstrated the following:				Yes	No	Remarks					
1	Performance criteria1:										
2	Performance criteria2:										
3	Performa	rformance criteria3:									
4	Performa	nance criteria4:									
5	Performa	nance criteria5									
6	Performance criteria6:										
Competent □			Not Yet Competent □								

Each	Assessment Task (with performance crit	eria)				
Asses	man resource services	Description of	assess	ment t	ask 2	
Durin follow	g the practical assessment, candidate de	emonstrated the	Yes	No	Remarks	
1	Performance criteria1:					
2	Performance criteria2:					
3	Performance criteria3:					
4	Performance criteria4:					
5	Performance criteria5					
6	Performance criteria6:					
Comp	petent 🗆	Not Yet Compe	npetent			
	Assessment Task (with performance crit	eria)				
	ssment Task 3: Evaluate human urce service delivery	Description of assessment task 3				
	•		1			
follow	g the practical assessment, candidate de ring:	emonstrated the	Yes	No	Remarks	
1	Performance criteria1:					
2	Performance criteria2:					
3	Performance criteria3:					
4	Performance criteria4:					
5	Performance criteria5					
6	Performance criteria6:					
Comp	petent 🗆	Not Yet Compe	tent 🗆			

Each Assessment Task (with performance criteria)							
Asses	ssment Task 4: Manage integration o	Description of assessment task 4:					
busine	ess ethics in human resource practice	s					
During followi	g the practical assessment, candidateing:	emonstrated the	Yes	No	Remarks		
1	Performance criteria1:						
2	Performance criteria2:						
3	Performance criteria3:						
4	Performance criteria4:						
5	Performance criteria5						
6	Performance criteria6:						
Comp	etent \square		Not Yet Competent □				
Portfoli	o(if any)		Description of portfolio				
Curren	t□ Sufficient□ Authe	ntic	l c□ ValidI	□ Valid□ Reliable I			
Portfolio meet the following performance standar			ards:	Yes	No	Remarks	
1	Performance criteria 1						
2	Performance criteria 2						
3	Performance criteria 3						
4							
Competent ☐ Not Yet Com				tent 🗆			

Assessor's Judgment Guide TITLE OF QUALIFICATION

This formati training prog		ent relates to the	CS Code	: Leve	l: 4	Version:		
Electrical Ma	chine Winding	g Technician						
Module Title Manage Hum	-	s	Assessn	nent Date (D	DD/MM/YY)	:		
Manage Hun	ian Nesource	3						
Guidance for Candidate To complete your assessment for this Curriculum Module, you need to answer the questions on the following pages successfully.								
Assessors Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)								
Candidate Details Name:								
Written Assessment Outcome	Name	COMPETENT☐ NOT YET COMPETENT☐ Name of the Assessor: Assessor's code:						
	_	re of the						
This formati programme:	ve assessme	ent relates to the train	ning	CS Code:	Level:4	Version:		
Electrical Ma								
Module Title Manage Hum		Assessme	nt Date (D	D/MM/YY):				

Question	Candidate's answer
29.	
20	
30.	
31.	
32.	
33.	
34.	
35.	
ან.	

This formative assessment relates to the training programme: Electrical Machine Winding Technician	CS Code:	Level: 4	Version:
Module Title: Develop Enterprenueurial Skills	Assessment D	Pate (DD/MM/YY):

Candidate Details	Name:
	Registration/Roll Number:
	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment):
	Assessment Task 1. Develop a business plan
Guidance	Assessment Task 2. Collect information regarding funding sources
for	Assessment Task 3. Develop a marketing plan
Candidate	Assessment Task 4. Develop basic business communication skills
	And complete:
	11. Knowledge assessment test (Written or Oral)
	12. 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:
	Performance Criteria 2: Performance Criteria 3:
	Performance Criteria 4:
	Performance Criteria 5:
	Performance Criteria 6:
Minimum Evidence	Assessment Task 2
Required	Performance Criteria 1:
	Performance Criteria 2:
	Performance Criteria 3: Performance Criteria 4:
	Performance Criteria 5:
	Assessment Task 3
	Performance Criteria 1:
	Performance Criteria 2:
	Performance Criteria 3: Performance Criteria 4:
	Performance Criteria 5:

Assessment Task 4:
Performance Criteria 1:
Performance Criteria 2:
Performance Criteria 3:
Performance Criteria 4:
Performance Criteria 5:
Portfolios required at the time of assessment (if any) like trainees assignment, Projects/Jobs etc:
Performance criteria 1 for the evaluation of portfolio
Performance criteria 2 for the evaluation of portfolio
Performance criteria 3 for the evaluation of portfolio

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)

Candida Details	ate	Name:								
Assess Outcom		Signature of the		NOT YET COMPETENT Assessor's code:						
		Assessm	ent Su	mmar	y (to be	filled b	y the a	assess	or)	
	Activ	rity			Method	ł			Res	sult
Nature of Activity			Written	Oral	Observation	Portfolio	Role Play	Sompetent		Not Yet Competent
Practica	al Skill Der	nonstration			✓		✓			
Knowle	dge Asses	sment	✓	✓						
Other R	Requireme	nt				✓				
						I				
Fach A	ssessmen	t Task (with perfo	rmanc	e crite	ria)					
		1 : Develop a b			Descrip	tion of	25225	ment ta	iek 1	
plan		•			Descrip	dioii oi	a33633	inent te	ISK I	
						1.41				
During		al assessment, c	andida	te den	nonstrat	ed the	Yes	No	Remarks	
1 Performance criteria1:										
2	Performa	Performance criteria2:							1	
3	Performance criteria3:								_	
Deuferman and a middle A.										
Performance criteria4: 5 Performance criteria5										
3										
6	renoma	nce criteria6:								
Competent D Not Vet Comp				Compo	tent \square	1	1			

Each Assessment Task (with performance criteria)							
Assess	ment Task 2 : Collect information	Description of assessment task 2					
regard	ing funding sources						
			T	T			
During followir	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks		
1	Performance criteria1:						
2	Performance criteria2:						
3	Performance criteria3:						
4	Performance criteria4:						
5	Performance criteria5						
6	Performance criteria6:						
Compe	etent \square	Not Yet Compe	Not Yet Competent □				
Each A	ssessment Task (with performance crit	eria)					
Assess	sment Task 3: Develop a marketing	Description of assessment task 3					
plan							
During following	the practical assessment, candidate de	monstrated the	Yes	No	Remarks		
1	Performance criteria1:						
2	Performance criteria2:						
3	Performance criteria3:						
4	Performance criteria4:						
5	Performance criteria5						
6	Performance criteria6:						
Compe	etent 🗆	Not Yet Compe	tent 🗆	1	1		

Each A	Each Assessment Task (with performance criteria)				
Assess	sment Task 4: Develop basic	Description of assessment task 4			
business communication skills					
During followir	the practical assessment, candidate de ng:	monstrated the	Yes	No	Remarks
1	Performance criteria1:				
2	Performance criteria2:				
3	Performance criteria3:				
4	Performance criteria4:				
5	Performance criteria5				
6	Performance criteria6:				
Compe	etent	Not Yet Competent □			
Portfoli	io(if any)	Description of portfolio			
Curren	t□ Sufficient□ Authenti	<u> </u>	:□ Valid□ Reliable □		
	io meet the following performance stand		Yes	No	Remarks
		aius.	163	110	Remarks
1	Performance criteria 1				
2	Performance criteria 2				
3	Performance criteria 3				
4					
Compe	Not Yet Compe	etent \square			

Assessors Judgment Guide TITLE OF QUALIFICATION

training prog	gram	ssessment relates to the ame: e Winding Technician	CS Code	: Leve	1: 4	Version:		
Module Title Develop Ente		nueurial Skills	Assessn	nent Date (D	DD/MM/YY)	:		
Guidance for Candidate To complete your assessment for this Curriculum Module, you need to answer the questions on the following pages successfully. 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		Signature of the	NOT YET COMPETENT□Assessor's code:					
This formative assessment relates to the training programme: Electrical Machine Winding Technician			ng	CS Code:	Level:4	Version:		
Module Title: Develop Enterprenueurial Skills				Assessme	nt Date (DI	D/MM/YY):		

Question	Candidate's answer
36.	
07	
37.	
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42.	

This formative assessment relates to the training programme: Electrical Machine Winding Technician	CS Code: 0713001135	Level: 4	Version:
Module Title: Repair Replace Allied Parts of Machine (Motor)	Assessment D	Date (DD/MM/YY):

Candidate Details	Name:
	Registration/Roll Number:
Guidance for Candidate	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment): 1. Assessment Task 1:Prepare for work to repair / replace allied parts of machine (Motor) 2. Assessment Task 2:Replace Bearing 3. Assessment Task 3:Replace Bush 4. Assessment Task 4: Replace Carbon Brushes 5. Assessment Task 5: Repair/Replace Commutator / Slip rings 6. Assessment Task 6: Check Rotor and its shaft 7. Assessment Task 7: Repair/Replace Centrifugal Switch (Clutch) of Motor 8. Assessment Task 8:Replace Capacitor of Motor 9. Assessment Task 9:Repair/Replace terminals of Motor
_	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: Identify the required PPE's Performance Criteria 2: Collect the required PPE's Performance Criteria 3: Identify the required tools and equipment Performance Criteria 4: Collect the required tools and equipment Performance Criteria 5: Ensure functional condition of PPE's/Tools and equipment Performance Criteria 6:Ensure safe working conditions
Minimum Evidence	Clear Passage
Required	Cleanliness
	Adequate light Ventilation
	Assessment Task 2
	Performance Criteria 1: Wear the required PPE's Performance Criteria 2: Pick the required tools and equipment Performance Criteria 3: Remove the faulty bearing Performance Criteria 4: Collect the relevant number bearing from store Performance Criteria 5: Replace the bearing Performance Criteria 6: Update record

Assessment Task 3

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Remove the faulty bush

Performance Criteria 4: Collect the relevant size of bush from store

Performance Criteria 5: Replace the bush Performance Criteria 6: Update record

Assessment Task 4

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Remove the faulty carbon brush

Performance Criteria 4: Collect the relevant size and material of carbon brush from store

Performance Criteria 5: Replace the carbon brush

Performance Criteria 6: Update record

Assessment Task 5

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Check smoothness of the surface of the commutator/slip rings

Performance Criteria 4: Perform required surfacing of commutator/slip rings

Performance Criteria 5: Perform undercutting of mica between segments of commutator with hacksaw blade

Performance Criteria 6: Perform cleaning of commutator/slip rings

Performance Criteria 7: Remove short circuited commutator/slip rings from the motor shaft

Performance Criteria 8: Collect the relevant size of commutator/slip ring from store

Performance Criteria 9: Replace the commutator/slip rings

Performance Criteria 10: Update record

Assessment Task 6

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Check smoothness of the surface of the rotor shaft

Performance Criteria 4: Check size of shaft according to inner diameter of bearing

Performance Criteria 5: Perform welding of shaft for sizing if required

Performance Criteria 6: Perform surfacing of rotor shaft to acquire correct bearing size

Performance Criteria 7: Check balance of rotor shaft

Performance Criteria 8: Perform balancing of rotor shaft if required

Performance Criteria 9: Perform cleaning of rotor shaft

Performance Criteria 10: Update record

Assessment Task 7

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Check working of centrifugal switch

Performance Criteria 4: Set working of centrifugal switch

Performance Criteria 5: Check contact points of centrifugal switch

Performance Criteria 6: Perform surfacing of contact points of centrifugal switch Performance Criteria 7: Perform cleaning of contact points of centrifugal switch

Performance Criteria 8: Update record

Assessment Task 8

Performance Criteria 1. Wear the required PPE's

Performance Criteria 2. Pick the required tools and equipment

Performance Criteria 3. Check the capacitor

Performance Criteria 4. Select the required capacitor size Collect the capacitor from main store

Performance Criteria 6. Replace the faulty capacitor

Performance Criteria 7. Update record

Assessment Task 9

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Perform physical Checking of the terminal plate and

terminals of motor

Performance Criteria 4: Perform cleaning of terminals and terminal plate to remove carbon dust

Performance Criteria 5: Check fixing of terminal plate Performance Criteria 6: Check the terminal linking strips Performance Criteria 7: Repair/Replace the faulty part

Performance Criteria 8: Update record

Portfolios required at the time of assessment (if any) like trainees assignment, Projects/Jobs etc:

Performance criteria 1 for the evaluation of portfolio Performance criteria 2 for the evaluation of portfolio Performance criteria 3 for the evaluation of portfolio

.....

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)

Candida Details	ate	Name:Registration/Roll Number:								
Assessi Outcom		NOT YET COMPETENT Name of the Assessor: Signature of the Assessor:								
		Assessm	ent Su	mmar	y (to be	filled b	y the a	assess	or)	
	Activ				Method		•		Res	sult
Nature	of Activity		Written	Oral	Observation	Portfolio	Role Play	Competent		Not Yet Competent
Practica	al Skill Der	nonstration			✓		✓			
Knowle	dge Asses	sment	✓	✓						
Other R	Requireme	nt				✓				
Each A	ssessmen	t Task (with perfo	ormanc	e crite	ria)					
		1 :Prepare for worth		epair	Descrip	tion of	assess	ment ta	ask 1	
During followi		al assessment, c	andida	te der	nonstrat	ed the	Yes	No	Remarks	
1	Performa	nce criteria 1: Ide	entify th	ne req	uired PP	E's				
2	Performa	nce criteria 2: Co	llect th	e requ	uired PP	E's				
3	Performa equipmen	ince criteria 3: Ide nt	entify th	ne req	uired too	ls and				
4		nce criteria 4: Co	ollect th	ie req	uired too	ls and				
Performance criteria 5: Ensure functional condition of PPE's/Tools and equipment				tion of						
6	Performation condition	nce criteria 6:En			-					
Compe	tent 🗆				Not Yet	Compe	tent 🗆			

Assess	sment Task 2: Replace Bearing	Description of a	assess	ment ta	ask 2
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1	Performance criteria 1: Wear the requi	red PPE's			
2	Performance criteria 2: Pick the requequipment				
3	Performance criteria 3: Remove the fa				
4	Performance criteria 4: Collect the rebearing from store Performance criteria 5: Replace the be				
5				<u> </u>	
6	Performance criteria 6: Update record		<u> </u>		
Compe	tent □	Not Yet Compe	tent □		
-					
Assess	sment Task 3: Replace Bush	Description of a	assess	ment ta	ask 3
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Wear the requi	ired PPE's			
2	Performance criteria 2: Pick the requequipment	uired tools and			1
3	Performance criteria 3: Remove the fa	ulty bush			1
4	Performance criteria 4: Collect the rebush from store	elevant size of			
5	Performance criteria 5: Replace the bu	ısh			
6	Performance criteria 6: Update record				
Compe	etent 🗆	Not Yet Compe	tent \square		
Assess Brushe	sment Task 4: Replace Carbon es	Description of a	assess	ment ta	ask 4
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Wear the requi	red PPE's			
2	Performance criteria 2: Pick the requequipment]
3	Performance criteria 3: Remove the faulty carbon brush]
4	Performance criteria 4: Collect the relevant size and material of carbon brush from store				
5	Performance criteria 5: Replace the ca	ırbon brush			
6	Performance criteria 6: Update record				
Compe	etent 🗆	Not Yet Compe	tent 🗆		

Assessment Task 5: Repair/Replace Commutator / Sliprings Description			assess	ment ta	ask 5
-	During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance criteria1: Wear the requir	ed PPE's			
2	Performance criteria2: Pick the requestion equipment	ired tools and			
3	Performance criteria3: Check smoo surface of the commutator/slip rings	thness of the			
4	Performance criteria4: Perform required surfacing of commutator/slip rings				
5	Performance criteria5: Perform under between segments of commutator with				
6	Performance criteria6: Perform cleanir commutator/slip rings	ng of			
7	Performance criteria7: Remove short of commutator/slip rings from the motor s				
8	Performance criteria8: Collect the relevant size of commutator/slip ring from store				
Performance criteria9: Replace the commutator/slip rings					
10	Performance criteria10: Update record				
Competent ☐ Not Yet Compe			tent 🗆		

Assessment Task 6: Check Rotor and its Shaft Description of a		assessi	ment ta	sk 6	
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Wear the requi	red PPE's			
2	Performance criteria 2: Pick the requequipment	ired tools and			
3	Performance criteria 3: Check smoot surface of the rotor shaft	othness of the			
4	Performance criteria 4: Check size of shaft according to inner diameter of bearing				
5	Performance criteria 5: Perform weld sizing if required	ing of shaft for			
6	Performance criteria 6: Perform sur shaft to acquire correct bearing size	facing of rotor			
7	Performance criteria 7: Check balance	of rotor shaft			
8	Performance criteria 8: Perform balancing of rotor shaft if required				
9	Performance criteria 9: Perform cleaning of rotor shaft				
10	10 Performance criteria 10: Update record				
Compe	etent 🗆	Not Yet Compe	tent 🗆		

Assessment Task 7: Repair/Replace Centrifugal Switch (Clutch) of Motor Description		Description of	assess	ment ta	sk 7
During following	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Wear the requi	ired PPE's			
2	Performance criteria 2: Pick the requestion equipment	uired tools and			
3	Performance criteria 3: Check working of centrifugal switch				
4	Performance criteria 4: Set working of centrifugal switch				
5	Performance criteria 5: Check cor centrifugal switch	ntact points of			
6	Performance criteria 6: Perform surfa points of centrifugal switch	cing of contact			
7	Performance criteria 7: Perform cleaning of contact points of centrifugal switch				
8 Performance criteria 8: Update record					
Competent ☐ Not Yet Compe		tent 🗆			

Assessment Task 8: Replace Capacitor of Motor Description of a		assess	ment ta	sk 8	
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance Criteria 1. Wear the requ	uired PPE's			
2	Performance Criteria 2. Pick the requequipment	uired tools and			
3	Performance Criteria 3. Check the capacitor				
	Performance Criteria 4. Select the required capacitor size				
	Performance Criteria 5. Collect the capacitor from main store.				
4	Performance Criteria 6. Replace the faulty capacitor				
5 Performance Criteria 7. Update record					
Competent ☐ Not Yet Compe		tent 🗆			

Assessment Task 9: Repair/Replace Description of terminals of Motor			assess	ment ta	sk 9
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks	
1	Performance criteria 1: Wear the requ	ired PPE's			
2	Performance criteria 2: Pick the requestion equipment	uired tools and			
3	Performance criteria 3: Perform physical Checking of the terminal plate and terminals of motor				
4	Performance criteria 4: Perform clean and terminal plate to remove carbon d	•			
5	Performance criteria 5: Check fixing of	f terminal plate			
6	Performance criteria 6: Check the terminal linking strips				
7	Performance criteria 7: Repair/Replace the faulty part				
8 Performance criteria 8: Update record					
Competent ☐ Not Yet Compe		tent 🗆			

Portfolio(if any)			Description of portfolio					
Current	 t□	Sufficient□	Authentic	:□ Valid	dП		Reliab	le 🗆
Portfoli	o meet the	following perfor	mance standa	ards:	Yes	No	Rema	arks
1	Performa	nce criteria 1						
2	Performa	nce criteria 2						
3	Performa	nce criteria 3						
4								
Compe	tent 🗆			Not Yet Comp	etent [
	g program al Machine	me: Winding Techn	ician					
			(Formative	CS Code	nt)	l evel: 4		Version:
			ician					
Licotiio	ai maoini	, willang reom	olari					
Module	Title:			Assessm	nent Da	ate (DD	/MM/YY	') :
Repair	Replace A	llied Parts of Ma	chine (Motor)					
Guidan	ce To	complete your	assessment	for this Curric	ulum l	Module	, you no	eed to answer
for Candida		questions on the	ne following	pages succes	sfully.	•		
		(to be completed assessment)	I by the Asses	ssor and signed	d both	by the a	issesso	r and the
Candida	ate	Name:			Regi	stration	/Roll Nu	ımber:
Details		Candidate Sign	ature.					

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: Electrical Machine Winding Technician	CS Code:	Level: 4	Version:
Competency Standard Title: Repair / Replace allied parts of Machine (Motor)	Assessme	I ent Date (DD	/MM/YY):

estion	Candidate's answer
43. Why bearing are installed in machines?	Bearing are used in machines to provide smooth and low friction running movement
44. What types of bearings are used in machines?	Two types of bearings are used in machines. 1- Ball bearing 2- Roller bearing
45. Material of bushes is?	Bushes are made with brass
46. Why carbon brushes are used in machines?	Carbon brushes are used to make electric connection in rotating / sliding contact. The brushes send electrical current to the commutator and are typically made of carbon or graphite.
47. Material used to lubricate bearing is?	Bearings in some applications use oil, but grease is thelubricant of choice for 80 to 90% of bearings. Grease consists of about 85% mineral or synthetic oil with thickeners rounding out the rest of the grease volume. The thickeners are usually lithium, calcium or sodium-based metallic soaps.
48. What is meant by bush and how it is lubricated?	A plain bearing, or more commonly sliding bearing is the simplest type, is bushing, also known as a bush. It is an independent plain bearing that is inserted into a housing to provide a bearing surface for rotary application. The grooves help lubrication enter the bearing, bushes are lubricated will liquids like mineral oil or vegetable oils, semi-solids like grease, and solid like graphite or molybdenum disulfide. These lubricants are used to reduce friction and wear, dissipate the frictional heat and to protect against corrosion.
49. What is the function of commutator?	To keep the torque on a DC motor from reversing every time the coil moves through the plane perpendicular to the magnetic field, a split-ring device called a commutator is used to reverse the current at that point. The commutation in DC machine or more specifically commutation in DC generatoris the process in which generated alternating current in the armature winding of a dc machine is converted into direct current after going through the commutator and the stationary brushes.
50. Material of rotor shaft is?	Ordinary rotor shafts are made with mild steel, but when high strength is required, alloy steel such as nickel, nickel-chromium or chromium-vanadium steel is used.
51. What is capacitor?	A capacitor is made up of two metallic plates. With a <u>dielectric material</u> in between the plates. When we apply a voltage over the two plates, an electric field is created. Positive charge will collect on one plate and negative charge on the other

Question	Candidate's answer
52. Why terminals are used in machines?	Terminals in machines are used to provide sound electrical connection between supply and winding. Terminal blocks are used to secure and/or terminate wires and, in their simplest form, consist of several individual terminals arranged in a long strip. Terminals are useful for connecting machine winding to electrical power, for connecting electrical switches and outlets to the mains.

This formative assessment relates to the training programme: Electrical Machine Winding Technician	CS Code: 0713001136	Level: 4	Version:
Module Title: Repair Replace Allied Parts of Machine (Transformer)	Assessment [Date (DD/MM/YY):

Candidate Details	Name:
	Registration/Roll Number:
Guidance for Candidate	To meet the required standard of assessment, you have to complete the following assessment tasks within the given time frame (for practical demonstration & assessment): 10. Assessment Task 1: Prepare for work to repair / replace allied parts of machine (Transformer) 11. Assessment Task 2: Collect the required materials/parts 12. Assessment Task 3: Perform filtration of Transformer Oil 13. Assessment Task 4: Replace Transformer Oil 14. Assessment Task 5: Perform De- Hydration of Silica Gel 15. Assessment Task 6: Repair / Replace Transformer Bushing 16. Assessment Task 7: Repair/ Replace Tap Changer 17. Assessment Task 8:Check main Tank body of Transformer for leakage 18. Assessment Task 9:Repair/Replace Buchholz Relay And complete: 15. 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: Identify the required PPE's
	Performance Criteria 2: Collect the required PPE's Performance Criteria 3: Identify the required tools and equipment
	Performance Criteria 4: Collect the required tools and equipment
Minimum	Performance Criteria 5: Ensure functional condition of PPE's/Tools and equipment Performance Criteria 6:Ensure safe working conditions
Evidence	Clear Passage
Required	➢ Cleanliness
	Adequate light
	Ventilation
	Assessment Task 2
	Performance Criteria 1: Collect list of the estimated material/parts for repair Performance Criteria 2: Check availability of the required parts/material in the store Performance Criteria 3:Place purchase order for the deficient parts/materials Performance Criteria 4: Collect the required parts/materials from the store

Assessment Task 3

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Collect oil sample

Performance Criteria 4: Check the dielectric strength of the oil Performance Criteria 5: Drain out oil from transformer tank Performance Criteria 6:Perform filtration of transformer oil

Performance Criteria 7: Update record

Assessment Task 4

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment Performance Criteria 3: Drain out old transformer oil from tank

Performance Criteria 4: Arrange new transformer oil

Performance Criteria 5: Refill in new transformer oil in tank

Performance Criteria 6: Update record

Assessment Task 5

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3:Open breather of transformer

Performance Criteria 4: Remove silica gel from breather of transformer

Performance Criteria 5: Spread removed silica gel under sun light over a sheet for dehydration

Performance Criteria 6: Heat removed silica gel in oven up to 120C⁰ for complete dehydration

Performance Criteria 7:Perform de-hydration of silica gel

Performance Criteria 8: Update record

Assessment Task 6

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Perform physical Checking of transformer bushing

Performance Criteria 4: Perform cleaning of transformer bushing to remove carbon dust

Performance Criteria 5: Check fixing of transformer bushing

Performance Criteria 6: Replace the damaged transformer bushing

Performance Criteria 7: Update record

Assessment Task 7

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Perform physical Checking of the tap changer

Performance Criteria 4: Perform cleaning of contact terminals of tap changer to remove carbon dust

Performance Criteria 5: Check fixing of tap changer

Performance Criteria 6: Check the connections of linking cables

Performance Criteria 7: Replace the faulty tap changer

Performance Criteria 8: Update record

Assessment Task 8

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Perform physicalChecking of the tank

Performance Criteria 4:Locate leakage point in main tank of transformer

Performance Criteria 5:Drain out oil from main tank

Performance Criteria 6: Refer for welding of the leakage point

Performance Criteria 7: Re-fill oil in main tank

Performance Criteria 8: Perform physical Checking of the tank

Performance Criteria 9: Update record

Assessment Task 9

Performance Criteria 1: Wear the required PPE's

Performance Criteria 2: Pick the required tools and equipment

Performance Criteria 3: Check Buchholz relay

Performance Criteria 4: Remove Buchholz Relay from transformer

Performance Criteria 5:Repair/Replace Buchholz relay

Performance Criteria 6: Update record

Portfolios required at the time of assessment (if any) like trainees assignment, Projects/Jobs etc:

Performance criteria 1 for the evaluation of portfolio Performance criteria 2 for the evaluation of portfolio Performance criteria 3 for the evaluation of portfolio

.....

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: Candidate Signature:	9
Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT

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				✓			

Each A	ssessment Task (with performance crite	eria)			
Assessment Task 1 : Prepare for work to repair / replace allied parts of machine (Transformer)		Description of	assessi	ment ta	sk 1
During followin	the practical assessment, candidate deng:	monstrated the	Yes	No	Remarks
1	Performance criteria1: Identify the requ	uired PPE's			
2	Performance criteria2: Collect the requ	iired PPE's			
3	Performance criteria3: Identify the req equipment	uired tools and			
4	Performance criteria4: Collect the req equipment				
5	Performance criteria5: Ensure function PPE's/Tools and equipment	nal condition of			
	Performance criteria6:Ensure safe wor conditions	king			
6	Clear Passage				
	Cleanliness				
	Adequate light				
	Ventilation				
Compe	etent 🗆	Not Yet Compe	etent \square		
	ment Task 2: Collect the required als/parts	Description of a	Description of assessment task 2		
During followin	the practical assessment, candidate dering:	monstrated the	Yes	No	Remarks
1	Performance criteria 1: Collect list of material/parts for repair	the estimated			
2	Performance criteria 2: Check availabi required parts/material in the store	lity of the			
3	Performance criteria 3:Place purchase order for the deficient parts/materials				
4	Performance criteria 4: Collect the requests/materials from the store	uired			
Compe	etent \square	Not Yet Compe	tent 🗆		
	sment Task 3: Perform filtration of ormer Oil	Description of	assessi	ment ta	sk 3

During the practical assessment, candidate demonstrated the following:			No	Remarks
ormance criteria1: Wear the requir	ed PPE's			
ormance criteria2: Pick the requ	ired tools and			
ormance criteria3: Collect oil samp	ole			
ormance criteria4: Check the diele	ctric strength of			
ormance criteria5: Drain out oil fro	om transformer			
ormance criteria6:Perform filtration	of transformer			
ormance criteria7: Update record				
Competent ☐ Not Yet Compe				
]	Not Yet Compe	tent 🗆		
	Not Yet Compe	tent 🗆		
Task 4: Replace Transformer	Not Yet Compe		ment ta	ask 4
	Description of a		ment ta	nsk 4 Remarks
Task 4: Replace Transformer	Description of a	assessi		
Task 4: Replace Transformer ractical assessment, candidate de	Description of a monstrated the red PPE's	assessi		
Task 4: Replace Transformer ractical assessment, candidate delegation or a criteria 1: Wear the requier or a criteria 2: Pick the requier and a criteria 2:	Description of a monstrated the red PPE's uired tools and	assessi		
Task 4: Replace Transformer ractical assessment, candidate deformance criteria 1: Wear the requirement ormance criteria 2: Pick the requirement ormance criteria 3: Drain out old	Description of a monstrated the red PPE's uired tools and transformer oil	assessi		
Task 4: Replace Transformer ractical assessment, candidate decormance criteria 1: Wear the requiormance criteria 2: Pick the requipment ormance criteria 3: Drain out old tank	Description of a monstrated the red PPE's uired tools and transformer oil	assessi		
o p o o o o	rmance criteria1: Wear the requirement rmance criteria3: Collect oil samp rmance criteria4: Check the diele rmance criteria5: Drain out oil from rmance criteria6: Perform filtration	rmance criteria1: Wear the required PPE's rmance criteria2: Pick the required tools and ment rmance criteria3: Collect oil sample rmance criteria4: Check the dielectric strength of I rmance criteria5: Drain out oil from transformer rmance criteria6:Perform filtration of transformer	rmance criteria1: Wear the required PPE's rmance criteria2: Pick the required tools and ment rmance criteria3: Collect oil sample rmance criteria4: Check the dielectric strength of I rmance criteria5: Drain out oil from transformer rmance criteria6:Perform filtration of transformer	rmance criteria1: Wear the required PPE's rmance criteria2: Pick the required tools and ment rmance criteria3: Collect oil sample rmance criteria4: Check the dielectric strength of I rmance criteria5: Drain out oil from transformer rmance criteria6:Perform filtration of transformer

Not Yet Competent □

Competent □

Assess of Silic	sment Task 5: Perform De- Hydration a Gel	De- Hydration Description of a			sk 5
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks	
1	Performance criteria1: Wear the requir	ed PPE's			
2	Performance criteria2: Pick the required tools and equipment				
3	Performance criteria3:Open breather of transformer				
4	Performance criteria4: Remove silica gel from breather of transformer				
5	Performance criteria5: Spread remove under sun light over a sheet for de-hyd				
6	Performance criteria6: Heat removed silica gel in oven up to 120C° for complete de-hydration				
7	Performance criteria7:Perform de-hydration of silica gel				
8					
Compe	etent	Not Yet Compe	tent 🗆		

Assessment Task 6: Repair / Replace Description of Transformer Bushing			assess	ment ta	isk 6
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks	
1	Performance criteria 1: Wear the requi	red PPE's			
2	Performance criteria 2: Pick the required tools and equipment				
3	Performance criteria 3: Perform physical Checking of				
4	Performance criteria 4: Perform cleani transformer bushing to remove carbon				
5	Performance criteria 5: Check fixing of transformer bushing				
6	Performance criteria 6: Replace the damaged transformer bushing				
7					
Compe	etent	Not Yet Compe	tent 🗆		

Assessment Task 7: Repair/ Replace Tap Changer Description of				ment ta	sk 7
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1	Performance criteria 1: Wear the requi	red PPE's			
2	Performance criteria 2: Pick the require equipment	ed tools and			
3	Performance criteria 3: Perform physical Checking of the tap changer				
4	Performance criteria 4: Perform cleaning of contact				
5	Performance criteria 5: Check fixing of	tap changer			
6	Performance criteria 6: Check the connections of linking cables				
7	Performance criteria 7: Replace the faulty tap changer				
8	8 Performance criteria 8: Update record				
Competent ☐ Not Yet Compe		tent 🗖			
<u> </u>					

Assessment Task8: Check main Tank body of Transformer for leakage			assess	ment ta	sk8
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks	
1	Performance criteria1: Wear the requir	red PPE's			
2	Performance criteria2: Pick the required tools and equipment				
3	Performance criteria3: Perform physical Checking of the tank				
4	Performance criteria4:Locate leakage point in main tank of transformer				
5	Performance criteria5:Drain out oil from	m main tank			
6	Performance criteria6: Refer for welding of the leakage point				
7	Performance criteria7: Re-fill oil in main tank				
8	Performance criteria8: Perform physical Checking of the tank				
9	9 Performance criteria9: Update record				
Compe	etent 🗆	Not Yet Compe	tent 🗆		

Assessment Task9: Repair/Replace Description of a Buchholz Relay			assessı	ment ta	sk9	
During the practical assessment, candidate demonstrated the following:				No	Remarks	
1	Performance criteria1: Wear the requir	ed PPE's				
2	Performance criteria2: Pick the require equipment	d tools and				
3	Performance criteria3: Check Buchhol:	z relay				
4	Performance criteria4: Remove Buchh transformer	•				
5	Performance criteria5:Repair/Replace	Buchholz relay				
6	Performance criteria6: Update record					
Compe	etent	Not Yet Compe	etent 🗆			
_						
Portfoli	o(if any)	Description of p	portfolic)		
Current	t□ Sufficient□ Authentio	c□ Valid			Reliable 🗆	
Portfoli	o meet the following performance stand	ards:	Yes	No	Remarks	
1	Performance criteria 1					
2	Performance criteria 2					
3	Performance criteria 3					
4						
Competent ☐ Not Yet Compe						

Knowledge Assessment TITLE OF QUALIFICATION

training pro	ive assessment relates to the gramme: achine Winding Technician	CS Code:	Level	: 4	Version:		
Liectrical ivia	aciline willaling recilinician						
Module Title Repair Repla (Transforme	place Allied Parts of Machine						
Guidance for Candidate To complete your assessment for this Curriculum Module, you need to answ the questions on the following pages successfully.							
	er the assessment)						
Candidate Details Name: Candidate Signature:			-				
Details	Candidate Signature:						
Details	Candidate Signature:			COMPETE			
Written Assessment	COMPETENT	N	OT YET	COMPETE			
Written	COMPETENT	N A	OT YET	COMPETEI	NT□		
Written Assessment	COMPETENT Name of the Assessor:	N A	OT YET	COMPETEI	NT□		
Written Assessment Outcome	COMPETENT Name of the Assessor:	N	OT YET	COMPETEI	NT□		
Written Assessment Outcome This format programme	COMPETENT Name of the Assessor:	N	OT YET	COMPETEI code:	NT D		
Written Assessment Outcome This format programme	COMPETENT Name of the Assessor: Signature of the Assessor: Assessor: ive assessment relates to the trait: achine Winding Technician	ning CS	OT YET ssessor's	COMPETEI code:	NT□ Version:		

Question	Candidate's answer
53. What is the function of transformer?	Transformers are devices used in electrical circuits to change the AC voltage of electricity flowing in the circuit. Transformers can be used either to increase the voltage (called "stepping up") or decrease the voltage ("step down"). It works on mutual induction.
54. What are the main parts of transformer?	These are the basic components of a transformer: Laminated core Windings Insulating materials Transformer oil Tap changer Oil Conservator Breather Cooling tubes
55. Why oil is used in transformer?	The basic functions of the oil used in transformers are heat conduction and electrical insulation. Transformer oil or insulating oil is oil that is stable at high temperatures and has excellent electrical insulating properties.
56. What types of oils are used in transformer?	It is normally obtained by fractional distillation and subsequent treatment of crude petroleum. Many mineral oils as well as chemicals have been used. Notable ones being Askarel and Pyrochlore.
57. What properties are required in transformer oil?	Synthetic transformer oil like chlorinated diphenyl has excellent properties like chemical stability, non-oxidizing, good dielectric strength, moisture repellant, reduced risk due to fire and explosion. Insulting property
58. Why Transformer Oil Test is performed?	Transformer Oil Test is used to check the strength of Di-Electric Constant.
59. Why transformer oil is filtered?	Transformer oil filtering is an important process which eliminates solid particles, dissolved gasses, and dissolved water. The electrical properties of the oil can be enhanced by filtering, dehydration, and degassing. Oil Filtering keeps the transformer in good condition and increases its life.
60. Why silica gel is used in transformer?	Silica gel is used in transformer to avoid entry of moisture air in to thetransformer. Silica gel crystals absorb the moisture in the air and allow dry air in to the transformer.
61. What is the colour of silica gel when it is installed?	Silica gel will be blue when installed or dry.

Question	Candidate's answer
62. What is the colour of silica gel when it has moisture and needs to be de-hydrated?	Silica gel colour will be changed to pink when it has moisture in it and needs to be de-hydrated.
63. Why bushings are used in transformer?	Bushing is an insulated device that allows an electrical conductor to pass safely through a grounded conducting barrier such as the case of atransformer. Bushings are typically made from porcelain; though other insulating materials are also possible, generally porcelain is used.
64. Why tap changer is used in transformer?	The output voltage of transformers varies according to its input voltage and the load. During loaded conditions, the voltage on the output terminal decreases, whereas during off-load conditions the output voltage increases. In order to balance the voltage variations, tap changers are used. Tap changers can be either on-load tap changers or off-load tap changers. In an on-load tap changer, the tapping can be changed without isolating the transformer from the supply. In an off-load tap changer, it is done after disconnecting the transformer. Automatic tap changers are also available.
65. What is the function of cooling tubes of main tank of transformer?	Cooling tubes are used to cool the transformer oil. The transformer oil is circulated through the cooling tubes. The circulation of the oil may either be natural or forced. In natural circulation, when the temperature of the oil raises the hot oil naturally rises to the top and the cold oil sinks downward. Thus the oil naturally circulates through the tubes. In forced circulation, an external pump is used to circulate the oil.
66. Why Buchholz relay is used in transformer?	The <u>Buchholz Relay</u> is a protective device located in connecting pipe from the main tank to the conservator tank. It is used to sense the faults occurring inside the transformer. It is a simple relay that is operated by the gases emitted during the decomposition of transformer oil during internal faults. It helps in sensing and protecting the transformer from internal faults.

(Summative Assessment) Instruction Sheet for the Candidate

Title of Qualification:	CS Code:	Level: 4	Version:
Electrical Machine Winding Technician			
Competency Standard Title:	Assessment [Date (DD/MM/YY	') :
Repair/Replace allied parts of Machine(Motor)			
Repair/replace allied parts of Machine (Transformer)			
Purpose of Assessment:	Summative As	ssessment	

Candidate Details	Name:
	Registration/Roll Number:
	To meet this standard, you are required to complete the following within the given time frame,4 Hrs (for practical demonstration & assessment):
	Assessment Task 1:
Guidance	Repair/replace the worn out/loose Rotar Shaft and replace the faulty Bearing of Motor
for	Assessment Task 2:
Candidate	Repair/replace the worn out/flashed contact of Tap changer and replace the damaged bushing of Transformer
	And complete:
	17. Knowledge assessment test (Written or Oral)18. Portfolios at the time of assessment (if any)
Minimum Evidence	During a practical assessment, under observation by an assessor, you will complete:
Required	Assessment Task 1

Performance Criteria 1.
Performance Criteria 2.
,equipment & PPE's.
Check functional condition of the required tools
,equipment & PPE's.

Performance Criteria 3. Use the required tools equipment & PPE's.

Performance Criteria 4. Ensure safe working conditions

a. Clear Passageb. Cleanlinessc. Adequate lightd. Ventilation

Performance Criteria 5. Inspect the bearing for

a. noise

b. Axial/Radial Play/Looseness

c. Stickinessd. Lubrication

e. Breakage

Performance Criteria 6. Remove cover of the motor **Performance Criteria 7.** Remove the faulty bearing

Performance Criteria 8. Check smoothness of the surface of the rotor shaft Check size of shaft according to inner diameter of bearing

Performance Criteria 10. Perform welding of shaft for sizing if required Performance Criteria 11. Perform surfacing of rotor shaft to acquire correct bearing size

Performance Criteria 12. Check balance of rotor shaft

Performance Criteria 13. Perform balancing of rotor shaft if required

Performance Criteria 14. Perform cleaning of rotor shaft

Performance Criteria 15. Collect the relevant number bearing from store Performance Criteria 16. Replace the bearing Performance Criteria 17. Perform test run of the

Motor

Performance Criteria 18. Perform fitting of the Motor

Performance Criteria 19. Update record

Assessment Task 2:

Performance Criteria 1. Identify the required tools, equipment & PPE's Performance Criteria 2. Check functional condition of the required tools/equipment and PPE's

Performance Criteria 3. Use the required tools equipment and PPE's

as per job demand.

Performance Criteria 4. Ensure safe working conditions

Clear Passage Cleanliness Adequate light Ventilation

Performance Criteria 5. Perform electrical isolation of Transformer.
Performance Criteria 6. Perform physical Checking of transformer bushing

Performance Criteria 7. Perform cleaning of transformer bushing to remove carbon dust

Performance Criteria 8. Check fixing of transformer bushing

Performance Criteria 9. Remove cover of transformer

Performance Criteria 10. Remove the damaged bushing of transformer Performance Criteria 11. Arrange the bushing required for replacement Performance Criteria 12. Replace the damaged bushing of transformer Performance Criteria 13. Perform physical Checking of the tap changer Performance Criteria 14. Perform cleaning of contact terminals of tap

changer to remove carbon dust

Performance Criteria 15. Che	ck fixing of tap changer				
Performance Criteria 16. Che	eck the connections of linking cables				
Performance Criteria 17. Ren	nove the faulty tap changer of transformer				
Performance Criteria 18. Arra replacement	ange the tap changer required for				
Performance Criteria 19. Rep	lace the faulty tap changer				
Performance Criteria 20. transformer's cover	Perform fixing of the				
Performance Criteria 21. Upd	ate record				
Portfolios required at the time of a assignment, Projects/Jobs for	ssessment (if any) like trainees/students				
Performance criteria 1 for the evaluation of portfolio					
Performance criteria 2 for the	evaluation of portfolio				

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: Candidate Signature:	-
Assessment Outcome	COMPETENT Name of the Assessor: Signature of the Assessor:	NOT YET COMPETENT

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				✓				

Each Assessment Task (with performance criteria)					
Assessment Task 1: Repair /replace the worn out/loose rotar shaft and replace the faulty bearing of Motor	Description of assessment task 1				

	During the practical assessment, candidate demonstrated the following:			No	Remarks
1.	Identify the required tools , equipment & PPE's				
2.	Check functional condition of the requi, equipment & PPE's.	ired tools			
3.	Use the required tools equipment &	PPE's.			
4.	Ensure safe working conditions • Clear Passage				
5.	Inspect the bearing for Noise Axial / Radial Play / Lo Stickiness Lubrication Breakage	ooseness			
6.	Remove cover of the motor				
7.	Remove the faulty bearing				
8.	Check smoothness of the surface of the	ne rotor shaft			
9.	Check size of shaft according to inner bearing	diameter of			
10.	Perform welding of shaft for sizing if re	quired			
11.	Perform surfacing of rotor shaft to acqueating size	uire correct			
12.	Check balance of rotor shaft				
13.	Perform balancing of rotor shaft if requ	uired			
14.	Perform cleaning of rotor shaft				
15.	Collect the relevant number bearing from	om store			
16.	Replace the bearing				
17.	Perform test run of the Motor				
18.	Perform fitting of the Motor				
19.	19. Update record				
Compe	etent	Not Yet Compe	tent 🗖		

Each A	ssessment Task (with performance crit	eria)				
Assessment Task 2: Repair/replace the worn out/flashed contact of Tap changer and replace the damaged bushing of Transformer			Description of assessment task 2			
During following	the practical assessment, candidate de	monstrated the	Yes	No	Remarks	
1.	Identify the required tools, equipment	& PPE's				
2.	Check functional condition of the requ PPE's/Tools, equipment.	ired				
3.	Use the required tools equipment a per job demand.	and PPE's as				
4.	Ensure safe working conditions Clear Passage Cleanliness Adequate Light Ventilation					
5.	Perform electrical isolation of Tran	sformer.				
6.	Perform physical Checking of transformer bushing					
7.	Perform cleaning of transformer bushing to remove carbon dust				-	
8.	Check fixing of transformer bushin	g			-	
9.	Remove cover of transformer					
10.	Remove the damaged bushing of t	ransformer				
11.	Arrange the bushing required for re	eplacement				
12.	Replace the damaged bushing of	transformer				
13.	Perform physical Checking of the tap	changer				
14.	Perform cleaning of contact terminals to remove carbon dust	of tap changer				
15.	Check fixing of tap changer					
16.	Check the connections of linking cable	es				
17.	Remove the faulty tap changer of tran	sformer				
18.	Arrange the tap changer required for replacement					
19.	Replace the faulty tap changer					
20.	Perform fixing of the transformer's cover					
21. Update record						
Compe	Competent □ Not Yet Competent □					

Portfolio(o(if any)	Des	cription of po	rtfolio)		
Current	□ Sufficient□	Authentic□	Valid□			Reliable	e □
Portfolio	meet the following perforn	nance standards:	Υ	'es	No	Rema	rks
1 I	Performance criteria 1						
2 I	Performance criteria 2						
3 I	Performance criteria 3						
4							
Compete	ent 🗆	Not	Yet Compete	nt 🗆]		
	(Summative	Judgment E OF QUAL Assessment /	IFICATIO Knowledg		art)		
Title of C		E OF QUAL	IFICATIO	je P	art)		Version:
	(Summative	E OF QUAL Assessment /	IFICATIO Knowledg	je P			Version:
Electrical Compete	(Summative Qualification: al Machine Winding Technicency Standard Title:	E OF QUAL Assessment /	IFICATIO Knowledg	je P	₋evel: 4	MM/YY	
Compete Repair/R	Qualification: al Machine Winding Technicency Standard Title: Replace allied parts of Mac	LE OF QUAL Assessment /	IFICATION Knowledge CS Code:	je P	₋evel: 4	MM/YY)	
Compete Repair/R	Qualification: al Machine Winding Technicency Standard Title: Replace allied parts of Maceeplace allied parts of Maceeplace allied parts of Machine Parts of Ma	LE OF QUAL Assessment /	IFICATION Knowledge CS Code:	je P	₋evel: 4	MM/YY	
Compete Repair/R Repair/re	Qualification: al Machine Winding Technicency Standard Title: Replace allied parts of Maceeplace allied parts of Maceeplace allied parts of Machine Machine Parts of Machine Par	LE OF QUAL Assessment /	IFICATION Knowledge CS Code:	je P	₋evel: 4	MM/YY)	
Compete Repair/R Repair/re	(Summative Qualification: al Machine Winding Technic ency Standard Title: Replace allied parts of Machine parts of Machine parts of Machiner)	cian hine(Motor) hine	CS Code: Assessmen	t Dat	_evel: 4 te (DD/I	rd, you):

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

Title of Qualification:	CS Code:	Level:4	Version:
Electrical Machine Winding Technician			
Competency Standard Title:	Assessme	nt Date (DD/	/MM/YY):
Repair/Replace allied parts of Machine(Motor)			
Repair/replace allied parts of Machine (Transformer)			

Question		Candidate's answer		
1.	Define shaft of electric motor?	In an electric motor, the moving part is the rotor, which turns the shaft to deliver the mechanical power. The rotor usually has conductors laid into it that carry currents, which interact with the magnetic field of the stator to generate the forces that turn the shaft.		
2.	What materials are used in manufacturing motor shafts?	The material used for ordinary shafts is mild steel, but when high strength is required, alloy steel such as nickel, nickel-chromium or chromium-vanadium steel is used.		
3.	Which type of bearing is used in motors?	A ball bearing is usually used in electric motor		
4.	Why sealed bearings are used in motors?	The seals are important in stopping grease lubrication used in the bearings from leaking out.		
5.	What are common causes of motor damage?	Common causes of damage to a motor include physical impact, electrical or mechanical overload and poor maintenance. A slightly misaligned or bent motorshaft will produce a humming sound. A similar noise can be created if there is a minor fault in the transmission equipment attached to the motor shaft.		
6.	Why some motors have two capacitors?	Some single-phase AC electric motors require a "start capacitor" to energize the second-phase winding (auxiliary coil) to create a rotating magnetic field while the other capacitor is used as "run capacitor" and connected with running winding to improve its power factor.		
7.	What is importance of bearing fitting at shaft?	A line-to-line assembly is when the bore of the inner ring of the bearing and the outer diameter of the shaft are the same. With a tight fit, the bore of the inner ring of thebearing is slightly smaller than the outer shaft diameter.		
8.	How you can measure size of bearing?	We can measure the dimensions of a bearing by using a Vernier caliper or measuring accurately with a steel ruler. All bearings have an inner diameter (ID), an outside diameter (OD) and width (W). Bearings are referenced by these dimensions, in order: ID x OD x W.		

Question	Candidate's answer		
9. What are the dimensions of a 6203 bearing?	6203Ball Bearing have dimensions as 17x40x12mm		
10. How do you choose a bearing?	When choosing a bearing, we must consider following important factors;		
11. What are tap changer and its purpose?	The purpose of a tap changer is to regulate the output voltage of a transformer. It does this by altering the number of turns in one winding and thereby changing theturn's ratio of the transformer. There are two types of transformer tap changers: an on-load tap changer (OLTC) and a deenergized tap changer (DETC).		
12. Why tap changers are connected on HV side?	The tap changer is placed on high voltage side because of high voltage the current through the HV winding is less compared to LV windings, hence there is less "wear" on the tap changer contacts.		
13. Why bushings are used in transformer?	A bushing is an insulated device that allows an electrical conductor to pass safely through a grounded conducting barrier such as the case of a transformer or circuit breaker. Bushings are typically made from porcelain; though other insulating materials are also possible, generally porcelain is used.		

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