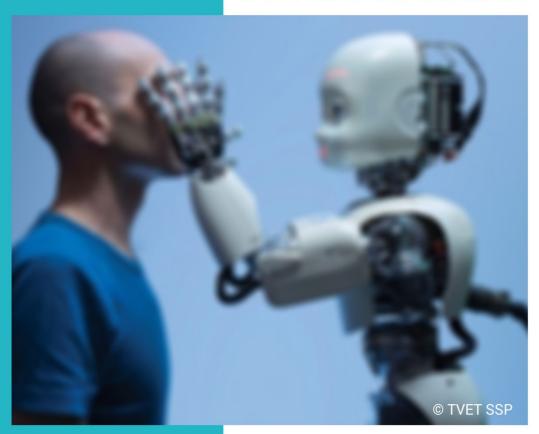








ROBOTICS TECHNICIAN



ASSESSMENT PACKAGE

National Vocational Certificate Level 3

Version 1 - October, 2019





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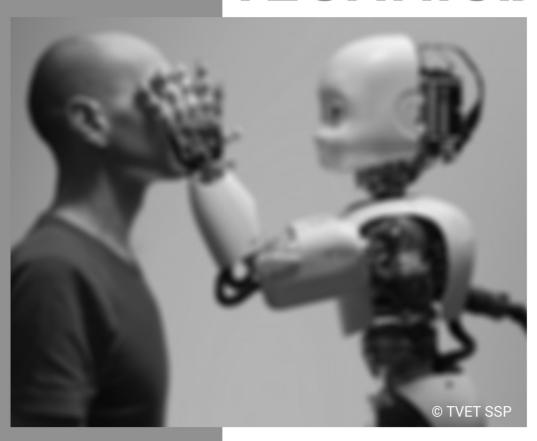
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Document Version October, 2019 **Islamabad, Pakistan**

ROBOTICS TECHNICIAN



ASSESSMENT PACKAGE
National Vocational Certificate Level 3

Version 1 - October, 2019

Self-Assessment Checklist

Candidate Name						
Registration No.						
Qualification	National Vocational Certificate Level 1 -4 Robotics Technician					
Competency	0714001062 Perform Functional testing of robotics					
Standards						
Assessment Task	Do the following tasks for the given project:					
	Create testing procedures required to test functionality					
	 Identify interfaces and tools which can be examined 					
	Examine functioning of specific interface					
	Examine functioning of equipment using specific tools					
	Analyze and compile examination functioning results of interface and					
	equipment					

I can.....

Performance Criteria	Yes	No
List all functions of robotic unit		
Isolate functions that require testing		
Prioritize functions for testing		
Organize related functions into groups		
 Identify and create testing procedures required to test functionality 		
Prepare robotic unit for testing		
7. Identify testing procedure to be executed		
Select testing equipment to be used during tests		
Indicate required results to be achieved		
10. Execute testing steps in order		
11. Compile results of all tests		
12. List all interfaces		
13. Identify interfaces which can be examined		
14. Organize interface in order of examination		
15. Identify acceptable functionality of interface		
16. Utilize the specific interface		
17. Examine functioning of the specific interface		
18. Analyze examination results		
19. Compile examination results		
20. List all equipment who's functionality requires examination		

21. List functionality of equipment's to be examined	
22. Identify tools required for examination	
23. Arrange tools required for examination	
24. Identify acceptable functionality of equipment	
25. Examine equipment using specific tools	
26. Analyze examination results	
27. Compile examination results	
28. List all tests for which report is required	
29. Identify result outcomes that are required to be reported	
30. Prepare optimal template for test report	
31. Compose test report based on template	
32. Assure quality of test report	
33. Identify distribution of report	
Candidate's Signature Assessor's	
Signature	
Date:	

Qualification	National Vocational Certificate Level 1 – 4 Robotics Technician
Competency Standard(s)	0714001062 Perform Functional testing of robotics

Instruction Sheet for the Candidate

Candidate Details	Name Registration/Roll Number				
Guidance for Candidate	To meet this standard you are required to complete the following within the given timeframe (for practical demonstration & assessment): Create testing procedures required to test functionality Identify interfaces and tools which can be examined Examine functioning of specific interface Examine functioning of equipment using specific tools Analyze and compile examination functioning results of interface and equipment Compose test report and assure quality of test report				
Time: 2.5 hrs.	During a practical assessment, under observation by an assessor, you are required to perform the above task, demonstrating the following criteria: 1. List all functions of robotic unit 2. Isolate functions that require testing 3. Prioritize functions for testing 4. Organize related functions into groups 5. Identify and create testing procedures required to test functionality 6. Prepare robotic unit for testing 7. Identify testing procedure to be executed 8. Select testing equipment to be used during tests 9. Indicate required results to be achieved 10. Execute testing steps in order 11. Compile results of all tests 12. List all interfaces				

Minimum Evidence Required	13. Identify interfaces which can be examined 14. Organize interface in order of examination 15. Identify acceptable functionality of interface 16. Utilize the specific interface 17. Examine functioning of the specific interface 18. Analyze examination results 19. Compile examination results 20. List all equipment who's functionality requires examination 21. List functionality of equipment's to be examined 22. Identify tools required for examination 23. Arrange tools required for examination 24. Identify acceptable functionality of equipment 25. Examine equipment using specific tools 26. Analyze examination results 27. Compile examination results 28. List all tests for which report is required 29. Identify result outcomes that are required to be reported 30. Prepare optimal template for test report 31. Compose test report based on template 32. Assure quality of test report 33. Identify distribution of report
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Assessors Judgment Guide

Qualification	National Vocational Certificate Level1	-4 Robotics Technician	
Competency	Perform Functional testing of robotics		
Standard(s)			
Candidate Details	Name:	Signature:	
Assessment Outcome	COMPETENT Name of the Assessor	NOT YETCOMPETENT Assessor's code:	
Outcome	Signature:		

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

Observation Checklist

Asses	sment Task Do the following tasks for the given p	Do the following tasks for the given project:					
	 Create testing procedures requ 	Create testing procedures required to test functionality					
	 Identify interfaces and tools where the second control is a second control in the second control	Identify interfaces and tools which can be examined					
	 Examine functioning of specific interface 						
	Examine functioning of equipment using specific tools						
	 Examine functioning of equipment using specific tools Analyze and compile examination functioning results of interface a 						
	equipment	on run	LIOIIII	g results of interface and			
		د: امنیم م	a£ +a	at varant			
	Compose test report and assur	e quant	y or te	est report			
follow	the practical assessment, candidate demonstrated the	Yes	No	Remarks			
1.	List all functions of robotic unit						
2.	Isolate functions that require testing						
3.	Prioritize functions for testing						
4.	Organize related functions into groups						
5.	Identify and create testing procedures required						
	to test functionality						
6.	Prepare robotic unit for testing						
7.	Identify testing procedure to be executed						
8.	Select testing equipment to be used during tests						
9.	Indicate required results to be achieved						
10.	Execute testing steps in order						
11.	Compile results of all tests						
12.	List all interfaces						
13.	Identify interfaces which can be examined						
14.	Organize interface in order of examination						
15.	Identify acceptable functionality of interface						
16.	Utilize the specific interface						
17.	Examine functioning of the specific interface						
18.	Analyze examination results						
19.	Compile examination results						
20.	List all equipment who's functionality requires						
20.	examination						
21.	List functionality of equipment's to be examined						
22.	Identify tools required for examination						
23.	Arrange tools required for examination						
24.	Identify acceptable functionality of equipment						
25.	Examine equipment using specific tools						
26.	Analyze examination results						
27.	Compile examination results						
28.	List all tests for which report is required						
29.	Identify result outcomes that are required to be						
25.	reported						
30.	Prepare optimal template for test report						
31.	Compose test report based on template						
32.	Assure quality of test report						
33.	Identify distribution of report						

Competent	Not Yet Competent	

Feedback to the Candidate			
Candidate's Signature Signature	_ Assessor's		

Knowledge Assessment

Qua	lification	National Vocational Certificate Level1 -4 Robotics Technician						
	npetency ndard(s)	0714001062 Perfo	0714001062 Perform Functional Testing of Robotics					
Candidate Name:								
Deta	ails	Registration/Roll N	umber:	Candic	late Signature:			
_		COMPETENT [NOT YETCO	MPETENT [
	essment come	Name of the Asses	sor:	As	sessor's code:			
		Signature of the As	sessor:					
			dentical, but similar cond		ords must be used	. Oral questioning may		
0	- ! : (0 :	6.1			Catiafa at a ma	Not Coliforn		
-	•	topics and their application	d questions correctly and ation)	d demonstrated	Satisfactory	Not Satisfactory		
1.	What is funct	ionality testing?						
2.	What is testin	g procedure?						
3.	What are the	possible steps for fu	nctionality testing?					
4.	Describe the functioning	examining process o	f interface and equipn	nent				

Why we prepare optimal template for test reports?

How do we assure the quality of test reports?

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate Level 1 -4 Robotics Technician
Competency	0714001063 Commission robot at workplace
Standards	
Assessment Task	 Given a robotic system that requires commissioning, The candidate is required to prepare the environment for commissioning of robot. The candidate should unbox robotic system and comprehend commissioning and operational instructions. The candidate should also perform basic assembly required for commissioning of robot and perform initial testing of commissioned robot.

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ı cai	ш	 	 	 	 	

Performance Criteria	Yes	No
Specify environmental conditions for commissioning of robot.		
2. Prepare suitable environment for commissioning of robot.		
Arrange tools and equipment required for the commissioning of robot.		
Identify instructions manual for unboxing of robotic system.		
5. Arrange tools and equipment required for unboxing robotic system		
6. Follow instructions provided in manual for unboxing of robotic system		
Identify commissioning and operational manuals.		
8. Follow commissioning and operational instructions from manual		
9. Assist supervisor in commissioning steps provided in manual.		
10. Identify required basic assembly		
11. Prioritize basic assembly based on requirements		
12. Follow instruction manual to perform basic assembly		
13. Perform initial tests of commissioned robot.		
14. Follow steps for initial testing of robot.		
15. Prepare initial testing report		

Candidate's Signature	Assessor's
Signature	
Data	

	National Vocational Certificate Level 1 -4 Robotics Technician
Qualification	
Competency	0714001063 Commission robot at workplace
Standard(s)	

Instruction Sheet for the Candidate

	1
Candidate Details	Name Registration/Roll Number
Guidance for Candidate	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment): 1. Given a robotic system that requires commissioning,
Time: 3 hrs.	During a practical assessment, under observation by an assessor, you are required to Commission a robotic system demonstrating the following criteria:
Minimum Evidence Required	 Specify environmental conditions for commissioning of robot. Prepare suitable environment for commissioning of robot. Arrange tools and equipment required for the commissioning of robot. Identify instructions manual for unboxing of robotic system. Arrange tools and equipment required for unboxing robotic system Follow instructions provided in manual for unboxing of robotic system Identify commissioning and operational manuals. Follow commissioning and operational instructions from manual Assist supervisor in commissioning steps provided in manual. Identify required basic assembly Prioritize basic assembly based on requirements Follow instruction manual to perform basic assembly Perform initial tests of commissioned robot. Follow steps for initial testing of robot. Prepare initial testing report

Assessors Judgment Guide

Qualification	National Vocational Certificate Level1 -4 Robotics Technician					
Competency Standard(s)	Commission robot at workplace					
Candidate Details	Name: Registration/Roll Number:	Signature:				
Assessment Outcome	COMPETENT Name of the Assessor Signature:	NOT YETCOMPETENTAssessor's code:_				

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								

Observation Checklist

Asses	1. Given a robotic system that requires commissioning, The candidate is required to prepare the environment for						
			aldate is red sioning of rol		to pre	pare the environment for	
			•		unbox	robotic system and	
						operational instructions.	
						erform basic assembly	
		•			_	robot and perform initial	
		testing o	f commissio	ned rol	oot.		
_		essment, candidate demonsti	rated the	Yes	No	Remarks	
follow							
1.	•	onmental conditions for					
<u> </u>	commissioning						
2.	· ·	ble environment for comm	issioning of				
<u> </u>	robot.		-1			-	
3.	_	and equipment required for	or the				
 	commissioning		f l			-	
4.		ructions manual for unboxir	ng of robotic				
<u> </u>	system.						
5.	_	s and equipment required fo	or unboxing				
	robotic system		f			-	
6.	unboxing of ro	uctions provided in manual	TOT				
7.		missioning and operational	manuals			_	
· ·		missioning and operational				_	
8.	from manual	missioning and operational	III3ti uctions				
		visor in commissioning step	s provided			-	
9.	in manual.	VISO1 III CO	,				
10.		ired basic assembly				-	
11.		ic assembly based on requir	rements			=	
		uction manual to perform b				=	
12.	assembly	•					
13.		ial tests of commissioned re	obot.				
14.	Followed steps	for initial testing of robot.					
15.	·	Il testing report					
Compe	etent 🗍		Not Yet Com	petent	·		

Feedback to the Candidate					
Candidate's SignatureSignature	Assessor's				

Knowledge Assessment

Qualification	National Vocational Certificate Level 1 -4 Robotics Technician					
Competency	0714001063 Commission robot at workplace					
Standard(s)						
Candidate Details	Name:					
	Registration/Roll Number: Candidate Signature:					
Assessment Outcome	COMPETENT NOT YETCOMPETENT					
	Name of the Assessor:Assessor's code:					

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

	stions (Candidate confidently answered questions correctly and demonstrated erstanding of the topics and their application)	Satisfactory	Not Satisfactory
1.	Describe environmental conditions which are suitable for commissioning of robot.		
2.	What tools and equipment are required for the commissioning of robot?		
3.	What tools and equipment are required for unboxing robotic system?		
4.	How can you assist supervisor in commissioning of robot?		
5.	What basic assembly is required for commissioning of robot?		

6.	In what order should the basic assembly be performed?	
7.	How do you confirm if the robot has been commissioned properly?	
	What should not do with the second part of force in this back of	
8.	What should we do with the results obtained from initial testing of robot?	
9.		
10.		

Self-Assessment Checklist

Candidate Name		
Registration No.		
Qualification	National Vocational Certificate Level1 -4 Robotics Technician	
Competency	0714001064 Deploy robot at workplace	
Standards	·	
Assessment Task	Given a robotic system, deploy the robotic system as per requirements by following instructions given in the deployment manual.	

Performance Criteria	Yes	No
 Specify environmental parameters for deployment of robot. 		
Identify suitable environment for deployment of robot.		
3. Prepare suitable environment for deployment of robot.		
4. Identify transportation means for the robotic system.		
Arrange transportation of the robot to the deployment site.		
6. Ensure safe transportation of the robotic system.		
7. Identify installation manuals.		
Arrange tools and equipment required for the deployment of robot.		
Follow instructions provided in manuals to install the robot at site.		
10. Comprehend initial tests of deployed robot.		
11. Follow steps for initial testing of deployed robot.		
12. Prepare initial testing report.		
andidate's SignatureAssessor's		
ignature		

Instruction Sheet for the Candidate

	National Vocational Certificate Level 1 -4 Robotics Technician
Qualification	
Competency	0714001064 Deploy robot at workplace
Standard(s)	

Candidate Details Guidance for Candidate	Registration/Roll Number
Time: 3 hrs.	During a practical assessment, under observation by an assessor, you are required to deploy a robotic system demonstrating the following criteria:
Minimum Evidence Required	 Specify environmental parameters for deployment of robot. Identify suitable environment for deployment of robot. Prepare suitable environment for deployment of robot. Identify transportation means for the robotic system. Arrange transportation of the robot to the deployment site. Ensure safe transportation of the robotic system. Identify installation manuals. Arrange tools and equipment required for the deployment of robot. Follow instructions provided in manuals to install the robot at site. Comprehend initial tests of deployed robot. Follow steps for initial testing of deployed robot. Prepare initial testing report.

Assessors Judgment Guide

Qualification	National Vocational Certificate Level1 -4 Robotics Technician			
Competency Standard(s)	Deploy robot at workplace			
Candidate Details	Name: Registration/Roll Number:			
Assessment Outcome	COMPETENT Name of the Assessor Signature:	NOT YETCOM TENTAssessor's code:		

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								

Observation Checklist

Assessment Task Given a robotic system, deploy the robotic system as per requirements by following instructions given in the deployment manual.					
	g the practical assessment, candidate nstrated the following:		Yes	No	Remarks
1.	Specified environmental parameters for deployment of robot.	r			
2.	Identified suitable environment for dep of robot.	loyment			
3.	Prepared suitable environment for dep of robot.	loyment			
4.	Identified transportation means for the system.	robotic			
5.	Arranged transportation of the robot to deployment site.	the			
6.	Ensured safe transportation of the robo system.	otic			
7.	Identified installation manuals.				
8.	Arranged tools and equipment required deployment of robot.	d for the			
9.	Followed instructions provided in manuinstall the robot at site.	ials to			
10.	Comprehended initial tests of deployed	robot.			
11.	Followed steps for initial testing of deprobot.	loyed			
12.	Prepared initial testing report.		•		
Comp	petent	Not Yet Cor	mpeter	nt 🔲	

Feedback to the Candidate			
Candidate's SignatureSignature	Assessor's		

Knowledge Assessment

Qualification	National Vocational Certificate Level 1 -4 Robotics Technician				
Competency Standard(s)	0714001064 Deploy robot at workplace				
Candidate	Name:				
Details	Registration/Roll Number:	Candidate Signature:			
Assessment	COMPETENT	NOT YETCOMPETENT			
Outcome	Name of the Assessor:	Assessor's code:			
	Signature of the Assessor:				

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

	estions (Candidate confidently answered questions correctly and onstrated understanding of the topics and their application)	Satisfactory	Not Satisfactory
1.	Describe some environmental parameters for deployment of robot?		
2.	How do you determine if environment is suitable for deployment of robot?		
3.	How to prepare an environment for deployment of robot?		
4.	How to transport the robotic system to deployment site?		
5.	How to ensure safety while transportation of the robotic system?		

		I	
6.	What is the purpose of installation manuals?		
7.	What tools and equipment are required for the deployment of robot?		
8.	How do you determine if the deployment was successful?		
9.	What do you do with initial test results?		
10.			

Self-Assessment Checklist

Candidate Name	
Registration No.	
Qualification	National Vocational Certificate Level-3 in Robotics Technician
Competency	0714001065 Monitor Operations of robot at workplace
Standards	
Assessment Task	Monitor robotic operation assigned by the assessor. Enlist all possible outcome of that particular operation as per Annexure A. Identify and report if there is any shortcoming by comparing it with established threshold.

I can.....

Performance Criteria	Yes	No
List all robot operation as per given robot.		
Select robot operation for which outcomes have to be identified		
3. List all possible outcomes of specified robot operation		
4. Recognize important parameters to assess outcomes of robot operation.		
5. Identify desired outcomes		
6. List established thresh holds for outcome		
7. Assess outcomes of the robotic operation		
8. Compare outcome against established thresh holds		
9. Examine errors in outcomes		
10. Apply corrective measure to eliminate errors		
11. Prepare operation report		
12. Identify log parameter		
13. Prepare routine log		
14. Create sense of continuity and consistency while maintaining logs		
15. Keep the log factual and detailed		
andidate's Signature Assessor's ignature	1	
Date:		

Monitor Operations of robot at workplace

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate Level-3 in Robotics Technician
Competency Standard(s)	0714001065 Monitor Operations of robot at workplace

Candidate	Name								
Details	D 11 11 15 15 15 15 15 15 15 15 15 15 15								
	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	1. Monitor robotic operation assigned by the assessor. Enlist all possible								
Candidate	outcome of that particular operation as per Annexure A. Identify and								
	report if there is any shortcoming by comparing it with established								
	threshold.								
Time: 3 hrs.	During a practical assessment, under observation by an assessor, you are required to monitor robotic operation assigned by the assessor. Enlist all possible outcome of that								
	particular operation as per annexure A. Identify and report if there is any shortcoming by comparing it with established threshold. You are required demonstrate the following criteria:								
	1. List all robot operation								
	2. Select robot operation for which outcomes have to be identified								
	3. List all possible outcomes of specified robot operation								
	4. Recognize important parameters to assess outcomes of robot operation.								
N disaisaas saa	5. Identify desired outcomes								
Minimum Evidence	6. List established thresh holds for outcome								
	7. Assess outcomes of the robotic operation								
Required	8. Compare outcome against established thresh holds								
	9. Examine errors in outcomes								
	10. Apply corrective measure to eliminate errors								
	11. Prepare operation report								
	12. Identify log parameter								
	13. Prepare routine log								
	14. Create sense of continuity and consistency while maintaining logs								
	15. Keep the log factual and detailed								

Assessors Judgment Guide

Qualification	National Vocational Certificate Level-3 in Robotics Technician				
Competency	Monitor Operations of robot at workplace				
Standard(s)					
Candidate	Name:				
Details	Registration/Roll Number:	Signature:			
Assessment	COMPETENT	NOT YET COMPETENT			
Outcome	Name of the Assessor	Assessor's code: _			
	Signature:				

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

Observation Checklist

Asses	Assessment Task Monitor robotic operation assigned by the assessor. Enlist all possible outcome of that particular operation as per Annexure A. Identify and report if there is any shortcoming by comparing it with established threshold.						
_	During the practical assessment, candidate demonstrated the following: Yes No Remarks						
1.	List all robot or	peration					
2.	Select robot op be identified	peration for which outcomes	have to				
3.	List all possible operation	outcomes of specified robo	t				
4.	Recognize imposor of robot opera-	ortant parameters to assess tion.	outcomes				
5.	Identify desired	d outcomes					
6.	List established thresh holds for outcome						
7.	Assess outcomes of the robotic operation						
8.	Compare outcome against established thresh holds						
9.	Examine errors	s in outcomes					
10.	Apply correctiv	ve measure to eliminate erro	rs				
11.	Prepare operation report						
12.	Identify log parameter						
13.	Prepare routine log						
14.	Create sense o maintaining log	f continuity and consistency gs	while				
15.	Keep the log fa	ctual and detailed					
Comp	etent		Not Yet Com	petent		'	

Feedback to	Feedback to the Candidate		
Candidate's Signature	Assessor's Signature		

Annexure A:

Sr.	Operation	Threshold	Outcome	Shortcoming	Remarks
No.	Name		assess		

Knowledge Assessment

Qualification	National Vocational Certificate Level-3 in Robotics Technician					
Competency	0714001065 Monitor Operations of robot at workplace					
Standard(s)						
Candidate	Name:					
Details	Registration/Roll Number: Candidate Signature:					
Assessment Outcome	COMPETENT NOT YET COMPETENT Name of the Assessor: Assessor's code: Signature of the Assessor:					

Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.

	stions (Candidate confidently answered questions correctly and demonstrated erstanding of the topics and their application)	Satisfactory	Not Satisfactory
unae			
1.	Discuss Robotics operation and outcome of robotics procedure?		
2.	Explain threshold in robotic procedures.		
_			
3.	How shortcomings in robotics operation are identified?		
I		<u> </u>	
	14". " in increase that the manipular biotopical load		
4.	Why it is important to maintain historical log?		
5.			
6.			
ļ		<u> </u> 	
		1	
7.			
8.			

Self-Assessment Checklist

Candidate Name					
Registration No.					
Qualification	National Vocational Certificate Level1 -4 Robotics Technician				
Competency Standards	0714001061 Perform assembling of equipment / components				
Assessment Task	 Assemble a complete Robot step by step and make a list of all procedure step by step which you will perform. Also make a list of safety measures which you will use during assembling. Also compare your list of procedure with actual assembly manual. Knowledge assessment (Oral) 				

1								
ı	ca	n.		 		 	 	

Performance Criteria	Yes	No
Acquire list of assembly manuals		
Select relevant assembly/ installation manuals		
Read instruction manual thoroughly		
Mark relevant steps for assembly		
5. List the operation procedure for assembly		
6. Organize the assembly plan		
7. Make list of required items		
Ensure safety standards		
Prepare a working environment for assembly		
10. List all steps as per SOP.		
11. Follow the assembly steps.		
12. List all assemblies performed		
13. Select assemblies that require verification		
14. Match the assembly with the drawing		
15. Inspect joint/links coupling of the robot		
16. Verify the wire connections		
17. Compare assembly with the manual		
18. Generate verification report		

Candidate's Signature	_ Assessor's
Signature	
Date:	

Instruction Sheet for the Candidate

Qualification	National Vocational Certificate ROBOTICS TECHNICIAN Level 1 -4
Competency Standard(s)	0714001061 Perform assembling of equipment / components

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	 Assemble a complete Robot step by step and make a list of all procedure step by step which you will perform. Also make a list of safety measures which you will use during assembling. Also compare your list of procedure with actual assembly manual. Knowledge assessment (Oral) 							
Time: 120 min	During a practical assessment, under observation by an assessor, you are required to assemble a complete Robot by demonstrating the following criteria:							
Minimum Evidence Required	 Acquire list of assembly manuals Select relevant assembly/ installation manuals Read instruction manual thoroughly Mark relevant steps for assembly List the operation procedure for assembly Organize the assembly plan Make list of required items Ensure safety standards Prepare a working environment for assembly List all steps as per SOP. Follow the assembly steps. List all assemblies performed Select assemblies that require verification Match the assembly with the drawing Inspect joint/links coupling of the robot Verify the wire connections Compare assembly with the manual Generate verification report 							

Assessors Judgment Guide

Qualification	National Vocational Certificate ROBOTICS TECHNICIAN Level1 -4							
Competency Standard(s)	Perform assembling of equipment / components							
Candidate Details	Name: Registration/Roll Number:	Signature:						
Assessment Outcome	COMPETENT Name of the Assessor Signature:	NOT YETCOMPETENTAssessor's code:_						

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

Observation Checklist

	sment Task	2.	procedure step be safety measures of your list of proced Knowledge assess	y step which which you w lure with acto ment (Oral)	h you '	will per during	p and make a list of all rform. Also make a list of assembling. Also compare nanual.
	During the practical assessment, candidate demonstrat following:				Yes	No	Remarks
1.	Acquire list of	assemb	ly manuals				
2.	Select relevan	it asseml	oly/ installation ma	nuals			
3.	Read instructi	on manı	ual thoroughly				
4.	Mark relevant	steps fo	or assembly				
5.	List the opera	tion pro	cedure for assembly	/			
6.	Organize the a	assembly	<i>r</i> plan				
7.	Make list of re	equired i	tems				
8.	Ensure safety standards						
9.	Prepare a working environment for assembly						
10.	List all steps a	s per SO	Р.				
11.	Follow the ass	sembly s	teps.				
12.	List all assemb						
13.	Select assemb	require verification	า				
14.	Match the ass	embly w	ith the drawing				
15.	Inspect joint/I	inks cou	pling of the robot				
16.	16. Verify the wire connections						
17.	17. Compare assembly with the manual						
18.	Generate veri	fication	report				
Compe	etent			Not Yet Com	petent		

Feedback to the Candidate			
Candidate's Signature	Assessor's Signature		

Knowledge Assessment

Qualification	National Vocational Certificate Level 1 -4 Robotics Technician		
Competency Standard(s)	0714001066 Perform assembling of equipment / components		
Candidate Details	Name:		
Assessment Outcome	COMPETENT NOT YETCOMPETENT Name of the Assessor:Assessor's code: Signature of the Assessor:		
Candidate's response is not required to be identical, but similar concepts and/or keywords must be used. Oral questioning may be used to clarify candidate understanding of topic and its application.			

-	stions (Candidate confidently answered questions correctly and demonstrated extraording of the topics and their application)	Satisfactory	Not Satisfactory
1.	Why we need to read manuals before assembling a Machine?		
	Candidate's response	_	
2.	What is the basic operational procedure of assembly?		
	Candidate's response	_	
3.	What are the tools that required for assembly and why we need those specific tools?		
	Candidate's response	_	
4.	What should be the working environment for assembling a Robot?		
	Candidate's response	-	
5.	What safety measures required for assembling a Robot?		
6.	Do we need verification process after assembly? If yes then why we need verification process? What are the verifications processes?		
		1	

7.	What is the SOP that we need to follow during assembly?	
8.		
9.		
10.		

Assessors Judgment Guide

Qualification	National Vocational Certificate Level-3 Robotics Technician		
Competency Standard(s)	 Commission robot at workplace Deploy robot at workplace Perform assembling of equipment / components Perform Functional testing of robotics Monitor Operations of robot at workplace 		
Candidate Details	Name:		
Assessment Outcome	□ COMPETENT □ NOT YETCOMPETENT Name of the Assessor		

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

Observation Checklist

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	 Commission a Robotic system, assemble all of its parts and deploy it at given workspace by follow all operational instructions and safety measures. Also perform all of its functional testing and monitor all operations of deployed robot. Knowledge assessment (Oral) 					
	During the practical assessment, candidate demonstrated the following: Yes No Remarks					
1.	Isolate functions that require testing					
2.	Prioritize functions for testing			-		
	Identify and create testing procedures required			1		
3.	to test functionality					
4.	Prepare robotic unit for testing					
5.	Identify testing procedure to be executed					
6.	Select testing equipment to be used during tests					
7.	Indicate required results to be achieved					
8.	Execute testing steps in order			1		
9.	Identify interfaces which can be examined					
10.	Identify acceptable functionality of interface					
11.	Utilize the specific interface					
12.	Examine functioning of the specific interface					
13.	Analyze examination results					
14.	Identify tools required for examination					
15.	Identify acceptable functionality of equipment			1		
16.	Examine equipment using specific tools					
17.	Analyze examination results					
18.	Identify result outcomes that are required to be					
19.	Propers quitable equirenment for commissioning					
20.	Arrange tools and equipment required for the					
21.	Identify instructions manual for unboying of					
22.	Arrange tools and equipment required for unboxing robotic system					
23.	Follow instructions provided in manual for unboxing of robotic system					
24.	Follow commissioning and operational instructions from manual					
25.	Assist supervisor in commissioning steps provided in manual.					
26.	Prioritize basic assembly based on requirements					
27.	Follow instruction manual to perform basic assembly					
28.	Perform initial tests of commissioned robot.					
29.	Specify environmental parameters for deployment of robot.					
30.	Prepare suitable environment for deployment of robot.					
31.	Arrange transportation of the robot to the deployment site.					

32.	Ensure safe transportation of the robotic	system.	
33.	Identify installation manuals.		
	Arrange tools and equipment required for the		
34.	deployment of robot.		
35.	Follow instructions provided in manuals	to install	
	the robot at site.		
36.	Comprehend initial tests of deployed rob		
37.	Follow steps for initial testing of deploye	d robot.	
38.	Prepare initial testing report.		
39.	Select robot operation for which outcom to be identified	es have	
40.	Recognize important parameters to asse	ess	
40.	outcomes of robot operation.		
41.	Identify desired outcomes		
42.	Assess outcomes of the robotic operation	on l	
43.	Compare outcome against established t holds	hresh	
44.	Examine errors in outcomes		
45.	Apply corrective measure to eliminate en	rrors	
46.	Prepare operation report		
47.	Identify log parameter		
48.	Prepare routine log		
49.	Create sense of continuity and consistency while maintaining logs		
50.	Keep the log factual and detailed		
51.	Acquire list of assembly manuals		
52.	Select relevant assembly/ installation manuals		
53.	Read instruction manual thoroughly		
54.	Mark relevant steps for assembly		
55.	Organize the assembly plan		
56.	Ensure safety standards		
57.	Prepare a working environment for assembly		
58.	Follow the assembly steps.		
59.	Select assemblies that require verification		
60.	Match the assembly with the drawing		
61.	Inspect joint/links coupling of the robot		
62.	Verify the wire connections		
63.	63. Compare assembly with the manual		
Comp	petent	lot Yet Competer	nt 🔲

Feedback to the Candidate		
Candidate's		
Signature	Assessor'sSignature	

Instruction Sheet for the Candidate

	National Vocational Certificate Level-3 Robotics Technician		
Qualification			
Competency	Commission robot at workplace		
Standard(s)	Deploy robot at workplace		
	Perform assembling of equipment / components		
	Perform Functional testing of robotics		
	5. Monitor Operations of robot at workplace		

Candidate Details	Name Registration/Roll Number
	To meet this standard, you are required to complete the following within the giventimeframe (for practical demonstration & assessment):
Guidance for Candidate	 Commission a Robotic system, assemble all of its parts and deploy it at given workspace by follow all operational instructions and safety measures. Also perform all of its functional testing and monitor all operations of deployed robot. Knowledge assessment (Oral)
Time: 4 Hrs.	During a practical assessment, under observation by an assessor, you are required to commission a robot by demonstrating the following criteria:
	Isolate functions that require testing
	Prioritize functions for testing
	Identify and create testing procedures required to test functionality
	4. Propage relation unit for testing
	4. Prepare robotic unit for testing5. Identify testing procedure to be executed
	6. Select testing equipment to be used during tests
	7. Indicate required results to be achieved
	8. Execute testing steps in order
	9. Identify interfaces which can be examined
N d'in instrum	10. Identify acceptable functionality of interface
Minimum	11. Utilize the specific interface
Evidence	12. Examine functioning of the specific interface13. Analyze examination results
Required	14. Identify tools required for examination
	14. Identity tools required for examination
	15. Identify acceptable functionality of equipment
	16. Examine equipment using specific tools
	17. Analyze examination results
	18. Identify result outcomes that are required to be reported
	19. Prepare suitable environment for commissioning of robot.
	20. Arrange tools and equipment required for the commissioning of robot.
	21. Identify instructions manual for unboxing of robotic system.
	22. Arrange tools and equipment required for unboxing robotic system
	23. Follow instructions provided in manual for unboxing of robotic system
	24. Follow commissioning and operational instructions from manual

- 25. Assist supervisor in commissioning steps provided in manual.
- 26. Prioritize basic assembly based on requirements
- 27. Follow instruction manual to perform basic assembly
- 28. Perform initial tests of commissioned robot.
- 29. Specify environmental parameters for deployment of robot.
- 30. Prepare suitable environment for deployment of robot.
- 31. Arrange transportation of the robot to the deployment site.
- 32. Ensure safe transportation of the robotic system.
- 33. Identify installation manuals.
- 34. Arrange tools and equipment required for the deployment of robot.
- 35. Follow instructions provided in manuals to install the robot at site.
- 36. Comprehend initial tests of deployed robot.
- 37. Follow steps for initial testing of deployed robot.
- 38. Prepare initial testing report.
- 39. Select robot operation for which outcomes have to be identified
- 40. Recognize important parameters to assess outcomes of robot operation.
- 41. Identify desired outcomes
- 42. Assess outcomes of the robotic operation
- 43. Compare outcome against established thresh holds
- 44. Examine errors in outcomes
- 45. Apply corrective measure to eliminate errors
- 46. Prepare operation report
- 47. Identify log parameter
- 48. Prepare routine log
- 49. Create sense of continuity and consistency while maintaining logs
- 50. Keep the log factual and detailed
- 51. Acquire list of assembly manuals
- 52. Select relevant assembly/ installation manuals
- 53. Read instruction manual thoroughly
- 54. Mark relevant steps for assembly
- 55. Organize the assembly plan
- 56. Ensure safety standards
- 57. Prepare a working environment for assembly
- 58. Follow the assembly steps.
- 59. Select assemblies that require verification
- 60. Match the assembly with the drawing
- 61. Inspect joint/links coupling of the robot
- 62. Verify the wire connections
- 63. Compare assembly with the manual

Self-Assessment Checklist

Candidate Name				
Registration No.				
Qualification	National Vocational Certificate Level-3 Robotics Technician			
Competency	Commission robot at workplace			
Standards	Deploy robot at workplace			
	Perform assembling of equipment / components			
	Perform Functional testing of robotics			
	Monitor Operations of robot at workplace			
Assessment Task	1. Commission a Robotic system, assemble all of its parts and			
	deploy it at given workspace by follow all operational			
	instructions and safety measures. Also perform all of its			
	functional testing and monitor all operations of deployed			
	robot.			
	Knowledge assessment (Oral)			

Performance Criteria	Yes	No
Isolate functions that require testing		
Prioritize functions for testing		
Identify and create testing procedures required to test		
functionality		
Prepare robotic unit for testing		
Identify testing procedure to be executed		
Select testing equipment to be used during tests		
7. Indicate required results to be achieved		
Execute testing steps in order		
Identify interfaces which can be examined		
10. Identify acceptable functionality of interface		
11. Utilize the specific interface		
12. Examine functioning of the specific interface		
13. Analyze examination results		
14. Identify tools required for examination		
15. Identify acceptable functionality of equipment		
16. Examine equipment using specific tools		
17. Analyze examination results		
18. Identify result outcomes that are required to be reported		
19. Prepare suitable environment for commissioning of robot.		
20. Arrange tools and equipment required for the commissioning of		
robot.		
21. Identify instructions manual for unboxing of robotic system.		
22. Arrange tools and equipment required for unboxing robotic		
system 23. Follow instructions provided in manual for unboxing of robotic		
system		
24. Follow commissioning and operational instructions from manual		
25. Assist supervisor in commissioning steps provided in manual.		
26. Prioritize basic assembly based on requirements		
27. Follow instruction manual to perform basic assembly		

28. Perform initial tests of commissioned robot.	
29. Specify environmental parameters for deployment of robot.	
30. Prepare suitable environment for deployment of robot.	
31. Arrange transportation of the robot to the deployment site.	
32. Ensure safe transportation of the robotic system.	
33. Identify installation manuals.	
34. Arrange tools and equipment required for the deployment of robot.	
35. Follow instructions provided in manuals to install the robot at site.	
36. Comprehend initial tests of deployed robot.	
37. Follow steps for initial testing of deployed robot.	
38. Prepare initial testing report.	
39. Select robot operation for which outcomes have to be identified	
40. Recognize important parameters to assess outcomes of robot	
operation.	
41. Identify desired outcomes	
42. Assess outcomes of the robotic operation	
43. Compare outcome against established thresh holds	
44. Examine errors in outcomes	
45. Apply corrective measure to eliminate errors	
46. Prepare operation report	
47. Identify log parameter	
48. Prepare routine log	
49. Create sense of continuity and consistency while maintaining	
logs	
50. Keep the log factual and detailed	
51. Acquire list of assembly manuals	
52. Select relevant assembly/ installation manuals	
53. Read instruction manual thoroughly	
54. Mark relevant steps for assembly	
55. Organize the assembly plan	
56. Ensure safety standards	
57. Prepare a working environment for assembly	
58. Follow the assembly steps.	
59. Select assemblies that require verification	
60. Match the assembly with the drawing	
61. Inspect joint/links coupling of the robot	
62. Verify the wire connections	
63. Compare assembly with the manual	

Candidate's Signature	Assessor's
Signature	
Date:	

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