



QUALIFICATION FILE

Industrial Automation Specialist

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Flexi Qualification ☒ For ToT ☒ For ToA

☐ General ☐ Multi-skill (MS) ☒ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 5

Submitted By:

Instrumentation Automation Surveillance & Communication Sector Skill Council
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Section 1: Basic Details

1.	Qualification Name	Industrial Automation Specialist																
2.	Sector/s	Instrumentation																
3.	Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: 2022/AUT/IASC/06500, V5.0	Qualification Name of existing/previous version: Industrial Automation Specialist															
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																
5.	National Qualification Register (NQR) Code &Version (Will be issued after NSQC approval)	QG-05-CG-045552025-V2-IASC	6. NCrf/NSQF Level: NSQF Level: 5															
7.	Award (Certificate/Diploma/Advanced Diploma/ Any Other (Wherever applicable specify multiple entry/exits also & provide details in annexure)	Certificate																
8.	Brief Description of the Qualification	Industrial Automation Specialist qualification focuses on understanding user requirements, designing the systems, and testing it to ensure compliance with user specifications.																
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Completed 2nd year of BE/B-Tech in relevant field*</td> <td></td> </tr> <tr> <td>2</td> <td>Completed 3-year Engineering diploma (after 10th)</td> <td>1.5 Years</td> </tr> <tr> <td>3</td> <td>Previous NSQF Level 4.5</td> <td>1.5 Years</td> </tr> <tr> <td>4</td> <td>Previous NSQF Level 4.0</td> <td>3 Years</td> </tr> </tbody> </table> * Instrumentation/Mechanical/EEE/ECE/Mechatronics Age: NA		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 2 nd year of BE/B-Tech in relevant field*		2	Completed 3-year Engineering diploma (after 10th)	1.5 Years	3	Previous NSQF Level 4.5	1.5 Years	4	Previous NSQF Level 4.0	3 Years
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																
1	Completed 2 nd year of BE/B-Tech in relevant field*																	
2	Completed 3-year Engineering diploma (after 10th)	1.5 Years																
3	Previous NSQF Level 4.5	1.5 Years																
4	Previous NSQF Level 4.0	3 Years																

10.	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	19	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																					
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	Not applicable																						
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>Emp</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>150</td> <td>210</td> <td>150</td> <td>60</td> <td>570</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Emp	Total (Hours)	Classroom (offline)	150	210	150	60	570	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	Emp	Total (Hours)																			
Classroom (offline)	150	210	150	60	570																			
Online																								
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO 2015: 2433.0601																						
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Sr. Specialist/Consultant/Head																						
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	English and Hindi																						
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:																						
18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If "Yes", specify applicable type of Disability:																						
19.	How Participation of Women will be Encouraged	Training on this job role is planned for school only and female candidates will also be encouraged																						
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☐ Yes ☒ No																						
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No																						
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Mayank Bansal Email: sqa@iascsectorskillcouncil.in Contact No.: 9599284350 Website: https://iascsectorskillcouncil.in/																						
23.	Final Approval Date by NSQC: 07/10/2025	24. Validity Duration: 03 Years		25. Next Revision:07/10/2028																				

Section 2: Module Summary

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer to the curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	Emp	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Design and Assemble an Automation System	IAS/N2000	Core	5	8	60	90	90	00	240	40	60	-	-	100	30
2	Adaptation of IOT, IIOT, and Cloud Technologies in Industrial Plants	IAS/N8013	core	5	1	15	15			30	40	40	10	10		10
3.	Technical Support for the installation and commissioning of the control panel	IAS/N2001	Core	5	7	60	90	60	00	210	40	60	-	-	100	30
4.	Coordination With Different Stakeholders	IAS/N2002	Core	5	1	15	15	-	00	30	40	60	-	-	100	20
5.	Employability Skill	DGT/VSQ/N0102 Ver. 1.0	Non-Core	5	2			00	60	60	20	30	-	-	50	10
Duration (in Hours) / Total Marks					19	150	210	150	00	570	180	250	10	10	350	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying PercentagePlease specify **any one** of the following:**Minimum Pass Percentage – Aggregate at qualification level:** 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)**Minimum Pass Percentage – NOS/Module-wise:** % (Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)**Section 3: Training Related**

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	B.E. (Electrical, Electronics, Mechatronics, Instrumentation, or similar stream) with 2 years' industry experience and 1 year teaching experience OR B.E./B.Tech. (Electrical, Electronics, Mechatronics, Instrumentation or similar stream) with 2 years industry experience, 1 year teaching experience
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		OR M.Sc. (Electronics or similar branch) with 3 years industrial experience and 1 year teaching experience.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) <i>(as per NCVET guidelines)</i>	A.M.E/B.E. (Electrical, Electronics, Mechatronics, Instrumentation, or similar stream) with 3 years' industry experience and 2 year teaching experience OR B.E./B.Tech. (Electrical, Electronics, Mechatronics, Instrumentation or similar stream) with 3 years industry experience, 2 year teaching experience OR M.Sc. (Electronics or similar branch) with 4 years industrial experience and 2 year teaching experience.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No <i>(If "Yes", details to be provided in Annexure)</i>
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	New Qualification

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	A.M.E/B.E. (Electrical, Electronics, Mechatronics, Instrumentation, or similar stream) with 4 years' industry experience and 3 year teaching experience OR B.E./B.Tech. (Electrical, Electronics, Mechatronics, Instrumentation or similar stream) with 4 years industry experience, 3 year teaching experience OR M.Sc. (Electronics or similar branch) with 5 years industrial experience and 3 year teaching experience
2.	Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	A.M.E/B.E. (Electrical, Electronics, Mechatronics, Instrumentation, or similar stream) with 5 years' industry experience and 4 year teaching experience OR B.E./B.Tech. (Electrical, Electronics, Mechatronics, Instrumentation or similar stream) with 5 years industry experience, 4 year teaching experience OR M.Sc. (Electronics or similar branch) with 6 years industrial experience and 4 year teaching experience
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) <i>(as per NCVET guidelines)</i>	A.M.E/B.E. (Electrical, Electronics, Mechatronics, Instrumentation, or similar stream) with 6 years' industry experience and 5 year teaching experience OR B.E./B.Tech. (Electrical, Electronics, Mechatronics, Instrumentation or similar stream) with 6 years industry experience, 5 year teaching experience

		OR M.Sc. (Electronics or similar branch) with 7 years industrial experience and 5 year teaching experience
4.	Assessment Mode <i>(Specify the assessment mode)</i>	Both online and offline
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☐ Yes ☐ No <i>(details to be provided in Annexure-if it is different for Assessment)</i>

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

NSQC Approved

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): In Process
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): NO
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validations provided: 21
5.	Estimated nos. of persons to be trained and employed: Approx. 3000
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes If “No”, why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors <i>(Mandatory)</i>	Annexure 1
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	Annexure 2
3.	Annexure: Detailed Assessment Criteria <i>(Mandatory)</i>	Annexure 3
4.	Annexure: Assessment Strategy <i>(Mandatory)</i>	Annexure 4
5.	Annexure: Blended Learning <i>(Mandatory, in case selected Mode of delivery is “Blended Learning”)</i>	
6.	Annexure: Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i>	
7.	Annexure: Acronym and Glossary <i>(Optional)</i>	Annexure 5
8.	Supporting Document: Model Curriculum <i>(Mandatory – Public view)</i>	Annexure 6
9.	Supporting Document: Career Progression <i>(Mandatory - Public view)</i>	Annexure 7
10.	Supporting Document: Occupational Map <i>(Mandatory)</i>	Annexure 8
11.	Supporting Document: Assessment SOP <i>(Mandatory)</i>	Annexure 9
12.	Any other document you wish to submit:	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge /Process	Knowledge facts, concepts and principles that need to be known and/or understood to accomplish a task or to solve a problem. Responsible for coding design and prototyping needed for various processes of industries and operation of the plant. Demonstrate the requirement of automation in factory / plant machinery to sale to required products.	Theoretical and practical skills of the individual are applied to work in predictable and familiar context. The evolving nature of the business and technology environment demands dealing with new scenarios and adapting solutions in the context of the target industry quickly which makes the process adaptive and non-routine. Demonstrate need of automation solution, business growth, industry communication, conversion of sales target etc. - Identify and prospect potential clients interested in adopting automation technologies. - Engage with leads through various channels, including emails, phone calls, and presentations. - Present our automation solutions effectively to demonstrate how they can address clients' specific challenges and needs. Hence the qualification is pegged at Level 4	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	- Provide technical insights and advice to clients, positioning yourself as a trusted automation advisor. - Collaborate with technical teams to tailor automation solutions to clients' unique requirements. - Design and present customized proposals that showcase the value of our automation offerings.	The target learner is the industry professional who analyse the need of plants equipment and its efficiency including need of modification/upgradation of machinery. - Identify and prospect potential clients interested in adopting automation technologies. - Engage with leads through various channels, including emails, phone calls, and presentations. - Present our automation solutions effectively to demonstrate how they can address clients' specific challenges and needs.	5

Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Candidates will be able to complete the assignment of introducing the need of business target and sales of product / machine and its automation. Will be ready to approach industry with appropriate advice on automation requirements and supply the necessary tools.	A range of cognitive and practical skills are required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials, and information. • Conduct live or virtual demonstrations of our automation solutions, showcasing their capabilities and benefits. • Address technical questions and concerns raised by potential clients during demonstrations. • Collaborate with technical teams to tailor automation solutions to clients' unique requirements. • Design and present customized proposals that showcase the value of our automation offerings.	5
Broad Learning Outcomes/Core Skill	Able to market the technical (automation) need in the industry. candidate may carry out a job requiring a limited range of routine and predictable activities. Candidates will be able to:	The individual in this job will connect with the automation industry to market and sale the industrial automation product and create connections with manufacturing companies by which solution can be provided Business to Business. • Maintain strong relationships with existing clients, providing post-sale support and addressing any technical queries. • Stay informed about automation industry trends, competitor offerings, and emerging technologies. • Share market insights with internal teams to shape our automation product roadmap.	5
Responsibility	Individual will be responsible for market the automation solution for the company, including: • Automation Solutions Sales • Consultative Selling	Identify opportunities to expand clients' adoption of automation solutions, upselling relevant products and services. • Identify and prospect potential clients interested in adopting automation technologies. • Engage with leads through various channels, including emails, phone calls, and presentations.	5

	• Solution Customization • Technical Demonstrations • Negotiation and Closing • Client Relationship Building • Market Research and Insights • Sales Reporting and Forecasting	• Present our automation solutions effectively to demonstrate how they can address clients' specific challenges and needs. • Understand clients' business processes, workflows, and pain points to recommend appropriate automation strategies. • Provide technical insights and advice to clients, positioning yourself as a trusted automation advisor. • Collaborate with technical teams to tailor automation solutions to clients' unique requirements. • Design and present customized proposals that showcase the value of our automation offerings. • Conduct live or virtual demonstrations of our automation solutions, showcasing their capabilities and benefits. • Address technical questions and concerns raised by potential clients during demonstrations. • Work closely with clients to understand their budget, procurement processes, and timelines. • Negotiate contract terms and pricing to reach mutually beneficial agreements. • Close sales deals and secure signed contracts. • Maintain strong relationships with existing clients, providing post-sale support and addressing any technical queries. • Keep clients informed about updates and enhancements to our automation solutions. • Stay informed about automation industry trends, competitor offerings, and emerging technologies. • Share market insights with internal teams to shape our automation product roadmap. • Maintain accurate records of sales activities, lead interactions, and deals in CRM software. • Generate sales reports and forecasts to contribute to sales planning and strategy.	
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Annexure: Learning Outcomes and Assessment Criteria

Detailed learning outcomes and assessment criteria for the qualification are as follows:

NOS/Module Name	Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
IAS/N2000: Design and Assemble Automation System	<i>Capture the industry process</i>			-	-
	Understand and capture the general value chain of the end user industry	1	1	-	-
	Understand and capture the manufacturing process/system in the end user industry	1	1	-	-
	Understand and capture the equipment used in different stages of the process	1	1	-	-
	Understand and capture the critical stages in the process	1	1	-	-
	Explain about the possible automation in the existing processes and global trends in automation	2	1	-	-
	<i>Capture user requirements and specifications</i>			-	-
	Capture the client requirement at broad level from the proposal	1	1	-	-
	Plan for a site visit to capture detailed requirements	1	1	-	-
	Capture the process flow involved and the critical stages in the process during site visit	1	1	-	-
	Deduce the safety aspect required in the critical stages of the process	1	1	-	-
	Capture the industrial and infrastructure process involved and the integration requirement of the processes	1	1	-	-
	Discuss with client and Capture the automation requirement in the control system	1	1	-	-
	Capture the purpose for automation and explain to the user about the possible outcomes	1	1	-	-
	Collect the details of the equipment installed or to be installed	-	1	-	-
	Collect the requirement specification if already prepared by the user and clarify on technical aspects	1	-	-	-
	Suggest globally practised and accepted automation systems if the user is not aware of the technical specifications	1	-	-	-
	Capture the sub systems that are involved in the process	-	1	-	-
	Capture sensors and actuators requirement.	1	1	-	-
	Collect information on process logic	-	1	-	-

Collect information for operator station screens	-	1	-	-
Probe the user by asking multiple questions to have clarity on the user requirement	1	1	-	-
Summarize the user requirement specifications and confirm with the client on their understanding	1	1	-	-
<i>Assist in deciding on deliverables and timelines</i>			-	-
Decide on whether the system can be developed as per the user requirement	1	-	1	-
Support the project manager in calculating the time required for each stage to ensure completion of project	1	-	1	-
Assist in preparing the work plan with deliverables and timelines	1	-	1	-
Explain the expected output to the user	1	1	-	-
<i>Design and develop control system application</i>			-	-
Develop control system application as per user requirement by following the standard operating procedure (SOP) of the organization	1	1	1	-
Apply approved engineering concepts, processes and principles in developing the control panel application	1	1	-	-
Use organization approved software (system and application software) to develop the system	1	1	-	-
Identify the requirement of indications, switchgears and accessories	-	1	-	-
Develop the control circuit drawing	-	1	-	-
Prepare general arrangement diagram	-	1	-	-
Prepare wiring plans	-	1	-	-
Integrate the main process system with the sub-systems as per the user requirement (e.g., using communication protocol)	-	1	-	-
Ensure that safety aspect of the process is captured in the design plan	1	1	-	-
Send the designed panel diagram for review to the customer	-	1	-	-
Ensure timely resolution of issues arising during the application development process	-	1	-	-
Elevate any issues as soon as identified to reporting manager	-	1	-	-
Get concurrence on function design specifications	-	1	-	-
Program PLC as per FDF	-	1	-	-
Program SCADA Application	-	1	-	-

	PLC-SCADA Communication	-	1	-	-
	Complete the application development and get approval of the application developed from the customer engineer	1	1	-	-
	Calculate the number of days needed for commissioning of the panel at site	1	-	-	-
	Create backup copies of all designs developed for control panel and store in a secure location	-	1	-	-
	Document the usage of product (product manual) and store them for future references	1	1	-	-
	<i>Test the system developed</i>			-	-
	Locate field devices and their interface to PLC		1	-	-
	Test the system in off line mode using simulator		1	-	-
	Verify that the system conforms with all the user specifications during testing	1	1	-	-
	Rework if there are any issues found and fix them		1	-	-
	Test for integration of main system with the sub-systems (if applicable)		1	-	-
	Send the test report for review to the customer		1	-	-
	Perform Factory Acceptance Test (FAT)	1	1	-	-
	Perform site acceptance test plan	1	1	-	-
	<i>Achieve quality and productivity standards</i>			-	-
	Ensure timely delivery of the control panel design as per agreed timeline	1	1	-	-
	Ensure that total cost and man hours spent is as per the budget planned	1	1	-	-
	Ensure compliance with relevant regulations, standards and codes of practices	1	1	-	-
	Ensure compliance of the application with manufacturing requirements and process capabilities analysis of the organization	1	1	-	-
	Ensure that the design conforms with normal safety standards	1	1	-	-
	Develop reliable panels so that the system does not fail during the usage	1	1	-	-
	NOS Total	40	50	10	-
IAS/N2001: Technical Support for Installation	<i>Capture work requirement</i>				
	Interact with the customer in order to understand and capture the site requirements, readiness				

and Commissioning of Control Panel	and commissioning time schedule	1	1	-	1
	Plan the commissioning activities in consultation with the installation and commissioning team, based on customers requirements	1	1	-	1
	Understand the design drawing and clarify doubts/issues before going to the site	1	1	-	-
	Use prescribed drawings, job instructions or work manuals	1	1	-	-
	Check availability of panel and tools required for installation	1	1	-	-
	Check availability of resources at customer site	1	1	-	-
	<i>Provide Technical Support for Installation and Commissioning</i>			-	-
	Ensure adequacy of working space, access and maintenance facilities at the site	1	1	-	-
	Supervise technicians to visually check the internal panel wiring and ensure that it is in accordance with the design drawing	-	1	-	-
	Carry out insulation check of internal panel wiring and devices within the panel	-	1	-	-
	Ensure that all devices in the panel are dirt free and the packaging has been completely removed	-	1	-	-
	Check if batteries and chargers have been assembled in accordance with the manufacturers recommended procedures	1	1	-	-
	Prepare the work sites test report and document for future use	-	1	-	-
	Ensure required tools for technicians to carry out the commissioning process	-	1	-	-
	Identify the conductors size and capacity for installation	1	1	-	-
	Ensure that the panel is positioned as prescribed, following safety norms	1	1	-	-
	Supervise technicians to connect with attention to socket outlets, switches and protective conductors	-	1	-	-
	Perform settings as per customer requirements on the equipment in each of the panels	1	1		

				-	1
Test all control system interlocks	1	1	-	-	
Check each digital control point by comparing the command at the control panel and status of the device that it controls	1	1	-	-	
Ensure that fuses, switches and other protective devices are labelled correctly	1	1	-	-	
Instruct to follow grounding and earthing procedures while commissioning	1	1	-	-	
Instruct to put up danger and warning notices, if necessary	1	1	-	-	
Ensure to follow company approved standard procedures by technicians in erection and commissioning process	1	1	-	-	
Test continuity, insulation resistance, functions of all devices, etc., after completion of installation	1	1	-	-	
Assist technicians for commissioning control panel	-	1	1	-	
Assist the customer in any tests to carry out on the installed panel	-	1	1	-	
Use the wiring diagram accurately to meet the specifications	-	1	1	-	
Ensure that applicable local electrical codes and standards are use	1	1	-	-	
<i>Rectify identified errors</i>			-	-	
Give technical support immediately to the technicians to rectify any errors identified	-	1	-	1	
Report defective material or inadequate numbers to seniors	1	1	-	-	
Check the physical condition of the instruments	1	1	-	-	
Report about inadequate quantity of consumables such as connectors, screws, nuts, etc.	-	1	-	-	
<i>Achieve productivity, quality and safety standards as per companys norms</i>	-	-	-	-	
Achieve 100% work schedule as planned for the week	-	1	1	-	
Meet 100% daily or monthly target	-	1	1	-	
Achieve zero errors in commissioning as per company policy	1	1	-	1	

	Achieve zero component damage	1	1	-	-
	Keep work area clean and organized	-	1	-	-
	Identify problems and alert in time	1	-	-	1
	Achieve 100% compliance with health and safety guidelines and rules	1	1	-	-
	NOS Total	30	50	10	10
IAS/N8013: Adaptation of, IIoT and cloud technologies in Industrial Plants.	Understand & capture critical process/assets	2	2	-	1
	Understand and capture existing automation system historian process data historians for insightful analysis.	2	2	-	1
	Understand and capture the critical assets/equipment used in different stages of the process.	2	2	-	-
	Explain about the possible automation in the existing processes and global trends in automation.	3	1	1	1
	Capture the IIoT/Cloud infrastructure requirements process and the integration requirement of the processes.	2	2	1	-
	Discuss with system integrators/process licensors and capture the advanced automation requirement in the existing control system.	1	2	1	1
	Capture the purpose for advanced automation and explain to the management and other stakeholders about the possible outcomes.	2	1	1	1
	Suggest globally practiced and accepted advanced automation systems specifications.	2	1	1	1
	Capture the sub systems that are involved in the process.	1	2	-	-
	Capture IIoT, IIoT sensors and actuators requirements.	2	2	-	-
	Summarize the technical requirement specifications and confirm with the system integrators/process licensors on their understanding.	1	2	1	1
	Develop cloud-based control system application as per requirement by following the standard operating procedure (SOP) of the organization.	1	3	1	-
	Use organization approved software (system and application software) to develop the cloud based insightful solutions.	1	2	1	0
	Integrate the main process system with the sub-systems as per the requirement (e.g., using communication protocol)	1	3	-	1
	Ensure that safety aspect of the process.	1	2	1	1

	Configure DCS, PLC, SCADA, SIS, and VFD systems in your process plant automation.	1	3	-	1
	Establish communication interface with automation systems installed for process automation.	1	2	1	1
	Ensure compliance with relevant regulations, standards and codes of practices.	2	1	-	1
	Ensure compliance of the application with manufacturing requirements and process capabilities analysis of the organization.	1	2	1	1
	Ensure that the design conforms with normal safety standards.	2	1	1	-
	Configuration of industrial wired and wireless devices such as HART/Field Bus/Ethernet in existing automation system.	1	3	-	-
	Capture infrastructure requirements and benefits of industry 4.0 tools adoption in industrial plants.	2	1	1	0
	Capture and purpose of Digital Twin Applications for process plant commissioning and training.	2	1	1	1
	Understand and capture Operation technology (OT), information technology (IT) convergence benefits.	1	1	1	1
	Understand and capture Industrial cyber security infrastructure requirements for safe and secure remote process plant proprietary data connectivity.	2	1	1	1
	capture the purpose of Industrial Process Plants Robotics Automation (RPA).	2	1	1	1
	NOS Total	40	40	10	10
DGT/VSQ/N0102: Employability Skills (60 Hours)	<i>Introduction to Employability Skills</i>	1	1	-	-
	identify employability skills required for jobs in various industries	-	-	-	-
	identify and explore learning and employability portals	-	-	-	-
	<i>Constitutional values – Citizenship</i>	1	1	-	-
	recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	4	4		1
	follow environmentally sustainable practices	1			1
	<i>Becoming a Professional in the 21st Century</i>	6	10		1
	recognize the significance of 21st Century Skills for employment	2	6		1
	practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management,	2			

	critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life				
	<i>Basic English Skills</i>	2	4		
	use basic English for everyday conversation in different contexts, in person and over the telephone	8	18		1
	read and understand routine information, notes, instructions, mails, letters etc. written in English	2	6		
	write short messages, notes, letters, e-mails etc. in English		6		1
	<i>Career Development & Goal Setting</i>	2			
	understand the difference between job and career	4	6		
	prepare a career development plan with short- and long-term goals, based on aptitude	11	14		3
	<i>Communication Skills</i>	2	4		
	follow verbal and non-verbal communication etiquette and active listening techniques in various settings	2			1
	work collaboratively with others in a team	2	6		1
	<i>Diversity & Inclusion</i>	1			1
	communicate and behave appropriately with all genders and PwD	2	4		
	escalate any issues related to sexual harassment at workplace according to POSH Act	2			
	<i>Financial and Legal Literacy</i>	13	12		5
	select financial institutions, products and services as per requirement	2	2		1
	carry out offline and online financial transactions, safely and securely	2	4		
	identify common components of salary and compute income, expenses, taxes, investments etc	4	2		1
	identify relevant rights and laws and use legal aids to fight against legal exploitation	1	1		
	<i>Essential Digital Skills</i>	1	1		1
	operate digital devices and carry out basic internet operations securely and safely	1	1		1
	use e- mail and social media platforms and virtual collaboration tools to work effectively	2	1		1
	use basic features of word processor, spreadsheets, and presentations	6	8		1

<i>Entrepreneurship</i>	2	3		1
identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	2	1		
develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	2	4		
identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	4	5		1
<i>Customer Service</i>	2	1		1
identify different types of customers	1	3		
identify and respond to customer requests and needs in a professional manner.	1	1		
follow appropriate hygiene and grooming standards	4	5		1
<i>Getting ready for apprenticeship & Jobs</i>	1	1		1
create a professional Curriculum vitae (Résumé)	1	2		
search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	1	1		
apply to identified job openings using offline /online methods as per requirement	1	1		
answer questions politely, with clarity and confidence, during recruitment and selection	2	2		1
identify apprenticeship opportunities and register for it as per guidelines and requirements	1	1		
NOS Total	20	30	-	-
Total Marks	180	250	10	10

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	7" HMI	As per requirement	1
2	PLC	As per requirement	1
3	Relief (Safety) Valve	As per requirement	1
4	Check Valve (non-return valve)	As per requirement	1
6	Gate Valve	As per requirement	1
7	Rotary Motion - Butterfly valve, Ball valve	As per requirement	1
8	For Indicators, Push button	As per requirement	1
9	Limit switches	As per requirement	5
10	Fibre connectors	As per requirement	5
11	LAN connectors	As per requirement	15
12	Cable Termination tools	As per requirement	1
13	Fibre cable	As per requirement	30
14	Cable tiles	As per requirement	3
15	LAN cable	As per requirement	15
16	Coaxial cable	As per requirement	15
17	Flat cable	As per requirement	15
18	Signal cable	As per requirement	15
19	Power cable	As per requirement	30
20	Terminals	As per requirement	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

7" HMI, PLC, Relief (Safety) Valve Check Valve (non-return valve), Gate Valve, Rotary Motion - Butterfly valve, Ball valve, For Indicators, Push button, Limit switches, Fibre connectors, LAN connectors, Cable Termination tools, Fibre cable, Cable tiles, LAN cable, Coaxial cable, Flat cable, Signal cable, Power cable, Terminals,

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	AKGEC	Prof. Som Ashutosh	General Manager	AKGEC SKILLS FOUNDATION, AKG Engineering College Campus, 27th		AKGEC	Prof. Som Ashutosh
2	BLUE STAR	Jagdish Sharma	H.R	Tamil nadu Smart and Advanced Manufacturing Centre, C block, Tidel Park, Taramani, Chennai	9650074838	jagdishsharma@bluestarindia.com	
3	Broadline	Natesh C	Manager R&D		044 28333083	nateshc@broadline.co.in	
4	Eagle star ventures	Kamal Babu Singh	Director		9326453055 /8758910185	kamababusingh@gmail.com	
5	EPLAN	Mukund Kulkarni	Head Education	EPLAN Software Pvt Ltd 5th Floor, Brigade Triumph, Dasarahalli Main Road, Sector B Hebbal Kempapura, Bengaluru -560092.	9004002823	Kulkarni.m@eplan.in	
6	G D Goenka Industry validation	Mr. Vipul Pandey	AGM		9149057199	Vipul.pandey@gdgu.org	
7	INDOTECH_Industry Validation						
8	Industry Validation_Philips Machine Tools	Puneet Kumar Saini	Sales Engineer		8851525264	puneet.k@philipscorp.com	
9	Janatics_Validation	R Ramesh	Executive Director		91 9629032777	didactic@janatics.co.in	
10	JLab_Industry Validation	Ravi Jain	Director				
11	JPRL	Tushar Agarwal	Operations Manager		8299303473	operations@jpri.in	
12	JSS	Khushbu Jain	Proprietor		0171-2642492	sales@jaincolab.com	
13	Kore_	Chaitanya. R. Doshi	Director		8884822483	chaitanya.r.doshi@gmail.com	
14	MBI	Aruna Achal	General Manager	Gurugram Chandigarh		enquiry@mindbrinno.com	
15	Mevachi	Divya Khurana	Head Business & Strategy		9718166848	info@mevachi.com	
16	Micromatic	KUNDAN KUMAR	Asst. Manager -		8744919163	Kundan.kumar@micromaticgrindi	

			Learning & Development			ng.com	
17	S.K.Engg Works_						
18	Scilab_Industry Validation	Navneet Jain	Director				
19	Servilink Industry Validation	Pratik Patel	Business Development Manager		70690 49716	servitech.ssl@servilinksystems.com	
20	TANSAM	Sukhpreet Singh	CEO		04469255700		
21	VARMAIC Industrial Validation	Mr. Dinesh Varma	Director		9235663734	mail.dv@varmaic.in	

Annexure: Training & Employment Details

Training and Employment Projections:

NSQC Approved

Year	Estimated Training of Total Candidates	Estimated training # of Women	Estimated training # of People with Disability
2025-26	500	50	
2026-27	1500	150	
2027-28	1000	100	

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented: NOT APPLICABLE FOR NEW QUALIFICATION.

- 1.
- 2.

Content availability for previous versions of qualifications: NOT APPLICABLE FOR NEW QUALIFICATION.

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools: NA

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☐ Theory/ Lectures - Imparting theoretical and conceptual knowledge		
2	☐ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☐ Showing Practical Demonstrations to the learners		
4	☐ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☐ Tutorials/ Assignments/ Drill/ Practice		
6	☐ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☐ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment:

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 2 Assessors.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Question bank is created by the Subject Matter Experts (SME) are verified by the other SME
- Questions are mapped to the specified assessment criteria
- Assessor must be ToA certified & trainer must be ToT Certified

4. Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding

5. Method of verification or validation:

- Surprise visit to the assessment location

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored

On the Job:

1. Each module (which covers the job profile of Automotive Service Assistant Technician) will be assessed separately.
2. The candidate must score 60% in each module to successfully complete the OJT.
3. Tools of Assessment that will be used for assessing whether the candidate is having desired skills and etiquette of dealing with customers, understanding needs & requirements, assessing the customer and perform Soft Skills effectively:
 - Videos of Trainees during OJT

4. Assessment of each Module will ensure that the candidate is able to:

- Effective engagement with the customers
- Understand the working of various tools and equipment

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf