QUALIFICATION FILE

Electric Vehicle Assembly Technician

☒ 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: 3.5

Submitted By:

Automotive Skills Development Council

E-113, Okhla Industrial Estate

Phase- III,

New Delhi-110020

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Section 1: Basic Details

<table>
<tr><td>1.</td><td>Qualification Name</td><td colspan="2">Electric Vehicle Assembly Technician</td></tr>
<tr><td>2.</td><td>Sector/s</td><td colspan="2">Automotive</td></tr>
<tr><td>3.</td><td>Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options
☐OEM</td><td>NQR Code & version of existing/previous qualification: (change to previous, once approved)</td><td>Qualification Name of existing/previous version:</td></tr>
<tr><td>4.</td><td>a. OEM Name
b. Qualification Name
(Wherever applicable)</td><td colspan="2">b. Electric Vehicle Assembly Technician</td></tr>
<tr><td>5.</td><td>National Qualification Register (NQR) Code & Version
(Will be issued after NSQC approval)</td><td></td><td>6. NCrF/NSQF Level: 3.5</td></tr>
<tr><td>7.</td><td>Award (Certificate/Diploma/Advance Diploma/ Any Other
(Wherever applicable specify multiple entry/exits also & provide details in annexure)</td><td colspan="2">Certificate</td></tr>
<tr><td>8.</td><td>Brief Description of the Qualification</td><td colspan="2">The individual at this job performs assembly of electric vehicle and its components.</td></tr>
<tr><td>9.</td><td>Eligibility Criteria for Entry for Student/Trainee/Learner/Employee</td><td colspan="2">a. Entry Qualification & Relevant Experience:
<table>
<tr><th>S. No.</th><th>Academic/Skill Qualification (with Specialization - if applicable)</th><th>Required Experience (with Specialization - if applicable)</th></tr>
<tr><td>1</td><td>11th Class pass</td><td></td></tr>
<tr><td>2</td><td>10th Class Pass with pursuing continuous schooling</td><td></td></tr>
<tr><td>3</td><td>8th Class pass</td><td>3 years of relevant experience</td></tr>
<tr><td>4</td><td>8th Class pass with 2 years of NTC</td><td>1 year of relevant experience</td></tr>
<tr><td>5</td><td>Certificate-NSQF (Automotive Assembly Technician level 3)</td><td>2 years of relevant experience</td></tr>
</table>
b. Age: 18 years</td></tr>
<tr><td>10.</td><td>Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>14</td><td>11. Common Cost Norm Category (I/II/III) (wherever applicable): I</td></tr>
<tr><td>12.</td><td>Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)</td><td colspan="2">NA</td></tr>
</table>

<table>
<tr><td>13.</td><td>Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)</td><td colspan="2">☒Offline ☐Online ☐Blended
<table>
<tr><th>Training Delivery Modes</th><th>Theory (Hours)</th><th>Practical (Hours)</th><th>OJT Mandatory (Hours)</th><th>OJT Recommended (Hours)</th><th>Total (Hours)</th></tr>
<tr><td>Classroom (offline)</td><td>154:00</td><td>236:00</td><td>30:00</td><td></td><td>420</td></tr>
<tr><td>Online</td><td></td><td></td><td></td><td></td><td></td></tr>
</table>
(Refer Blended Learning Annexure for details)</td></tr>
<tr><td>14.</td><td>Aligned to NCO/ISCO Code/s (if no code is available mention the same)</td><td colspan="2">NCO-2015/8211.1201</td></tr>
<tr><td>15.</td><td>Progression path after attaining the qualification (Please show Professional and Academic progression)</td><td colspan="2">To be Developed</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="2">NA</td></tr>
<tr><td>17.</td><td>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</td><td colspan="2">☐ Yes ☒ No URLs of similar Qualifications:</td></tr>
<tr><td>18.</td><td>Is the Job Role Amenable to Persons with Disability</td><td colspan="2">☐ Yes ☒ No
If “Yes”, specify applicable type of Disability:</td></tr>
<tr><td>19.</td><td>How Participation of Women will be Encouraged</td><td colspan="2">No gender sensitization</td></tr>
<tr><td>20.</td><td>Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)</td><td colspan="2">☒ Yes ☐ No</td></tr>
<tr><td>21.</td><td>Is Qualification Suitable to be Offered in Schools/Colleges</td><td colspan="2">Schools ☒ Yes ☐ No Colleges ☒ Yes ☐ No</td></tr>
<tr><td>22.</td><td>Name and Contact Details of Submitting / Awarding Body SPOC
(In case of CS or MS, provide details of both Lead AB & Supporting ABs)</td><td colspan="2">Name: Mr. Arindam Lahiri
Email: ceo@asdc.org.in Contact No.: 011-42599800
Website: https://www.asdc.org.in/</td></tr>
<tr><td>23.</td><td>Final Approval Date by NSQC: 03/05/2023</td><td>24. Validity Duration: 3 Years</td><td>25. Next Review Date: 03/05/2026</td></tr>
</table>

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 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/NSQF 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.	Organize work and resources (Manufacturing)	ASC/N9803, V1.0	Non-Core	3	2	25	35			60	50	30	00	20	100	10
2.	Employability Skills (60 Hours)	DGT/VSQ/N0102, V1.0	Non-core	5	2	24	36			60	20	30	00	00	50	5
3.	Interpret engineering drawing	ASC/N9805, V1.0	Non-Core	4	1	15	15			30	50	30	00	20	100	10
4.	Perform electric vehicle assembly operations	ASC/N3619, V1.0	Core	4	9	90	150	30		270	30	50	00	20	100	75
Duration (in Hours) / Total Marks					**14**	**154**	**236**	**30**		**420**	**150**	**140**	**00**	**60**	**350**	**100**

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/NSQF 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/NSQF 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 Percentage

*Please 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)*	ITI (Turner/Fitter/Electrician) with 5 years of industry and 1 year of training experience in Turner/Fitter/ Electrician Or ITI (Turner/Fitter/Electrician) with 6 years of industry experience in Turner/Fitter/Electrician Or Diploma (Mechanical/Electrical/Automobile) with 3 years of industry and 1 year of training experience in Mechanical/Electrical/Automobile Or Diploma (Mechanical/Electrical/Automobile) with 4 years of industry experience in Mechanical/Electrical/ Automobile
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	B.Tech (Mechanical/Electrical/Automobile) with 3 years of industry and 1 year of training experience in Mechanical/Electrical/Automobile
3.	**Tools and Equipment Required for Training**	☒Yes ☐No (*If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	

Section 4: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	ITI (Turner/Fitter/Electrician) with 6 years of industry and 1 year of training experience in Turner/Fitter/ Electrician Or ITI (Turner/Fitter/Electrician) with 7 years of industry experience in Turner/Fitter/Electrician Or Diploma (Mechanical/Electrical/Automobile) with 4 years of industry and 1 year of training experience in Mechanical/Electrical/Automobile Or Diploma (Mechanical/Electrical/Automobile) with 5 years of industry experience in Mechanical/Electrical/ Automobile
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	NA
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	NA
4.	**Assessment Mode** *(Specify the assessment mode)*	Blended
5.	**Tools and Equipment Required for Assessment**	☒ Same as for training ☐ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)*

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	**Latest Skill Gap Study (not older than 2 years) (Yes/No):** Yes
2.	**Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):** Yes
3.	**Government /Industry initiatives/ requirement (Yes/No):** Yes
4.	**Number of Industry validation provided:**
5.	**Estimated nos. of persons to be trained and employed:** 500
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:** In progress 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 *(Mandatory)*	*Attached*
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	*Attached*
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	*Attached*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Attached*
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	*Filled*
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	*Filled*
7.	**Annexure:** Acronym and Glossary *(Optional)*	
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	Attached
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	Attached
10.	**Supporting Document:** Occupational Map *(Mandatory)*	Attached
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	Attached
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	The individual on the job needs to carry out assembly of an electric vehicle and its components like fuel system, transmission system, braking, steering, electrical and electronic components, aesthetic parts, seating arrangements etc.	The individual on the job is responsible for own work and learning. Work in assembling environment.	3.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individual on the job needs to have factual knowledge of: ● Different types of assembly processes. ● Different types of tools used in the assembling process and their identification. ● How to read assembly drawing and the output as defined in the drawing. ● Knowledge of metal properties/ metallurgy. ● Quality check of assembled vehicle.	Factual knowledge of assembly processes and operations of different tools and equipment required.	3.5
Employment Readiness & Entrepreneurship **Skills & Mind-set/Professional Skill**	Recall and demonstrate practical skill to routine and repetitive applications: ● Assembling activities. ● Inspecting assembled vehicle. ● Recognise a workplace problem or a potential problem and take action.	Recall and demonstrate practical skill, routine and repetitive in wide range of application, using appropriate rule and tool, using quality concepts.	3.5
Broad Learning Outcomes/Core Skill	The user individual on the job needs to have written and oral communication skills like: ● To draw basic level drawings and charts. ● Read and interpret symbols given on equipment and work area. ● Read assembly drawings/ engineering drawings, sketches.	Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.	3.5
Responsibility	The individual on the job needs to know their own responsibility of conducting the assembly activities. Alongside this, interact with the maintenance team and material management team.	The individual on the job is responsible for own work and fully responsible for other's work and learning.	3.5

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1	Conveyor for vehicle assembly of suitable length		1
2	Ramp		2
3	Basic Tool Box Kit		3
4	Pneumatic Nut Runner with Socket		5
5	Open Ended Spanner Set	(6mm-24mm)	3
6	Ring Spanner	(6mm-24mm)	2
7	Screw Driver-Flat End & Cross Ended		3
8	Pliers-Straight & Nose Ended		2
9	Circlip Plier Expanding & Contracting Type		3
10	Air Blow Gun		2
11	Riveting Tool		2
12	Hydraulic Press		1
13	Pneumatic Press		1
14	Allen Key Set		3
15	Hammer Ball Peen 0.75Kg		5
16	Hammer Rubber/Plastic		3
17	Feeler Gauge 20 Blades Metric		5
18	Socket Screw Bit (Set)		5
19	Torque Wrench		2
20	Digital Multimeter		2
21	Impact Screw Driver For Flat & Philips Head		2
22	Files Different type		30
23	Loose Nut, Bolts and Rivets for assembly	Many Size (Quantity can vary)	50
24	Engine assembly/Sub assembly components For Practice		15
25	Air Compressor of Suitable Capacity		1
26	Assembly Fixtures Bins/Trays for Parts	5 Each	5
27	Components & Parts as Used in Auto Industry (study)	10 Each	10
28	Work bench For Assembly		15
29	Special Purpose Tools as Applicable		2
30	Vernier Caliper		2
31	Micrometer		2
32	Ammeter		5
33	Voltmeter		5

34	Cotton Waste Dusters		5
35	Assembly Process Flow Charts		1
36	Grease	500gm	500 gram
37	Lubricant	5L	5
38	Process Sheet/work instruction/manual	1 Each assembly	1
39	Fire Extinguisher (Different category)		3
40	Portable Welding Curtains with frame		4
41	Leather Safety Aprons		30
42	Leather Safety Gloves		30
43	Safety Glass with Side Shields		30
44	Safety helmet		15
45	Ear Plugs		30
46	Safety Shoes		30
47	First Aid Kit		1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Projector
3. Computer/Laptop
4. Chairs
5. Tables
6. Whiteboard marker

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 SKILLS FOUNDATION	Prof. Som Ashutosh	General Manager	AKGEC SKILLS FOUNDATION		somashutosh@akgec.ac.in	
2	Dyno Engineering Pvt. Ltd	Mr. Sagar Shinde	Director	Dyno Engineering Pvt. Ltd			
3	IKSC Knowledge Bridge	Mr. Atul B. Patil	Managing Director	IKSC Knowledge Bridge			
4	INCATech	Mr. Gopikrishnan T	Managing Director	INCATech		md@incaetek.com	
5	JBM Group	Mr. Rajeev Sharma	Associate Vice President-Center of Excellence	JBM Group		rajeev.sharma@jbm.co.in	

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2023-24	500	350	200	140	50	35
2024-25	1000	700	400	280	100	70
2025-26	1500	1050	600	420	150	105

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:

1.
2.

Content availability for previous versions of qualifications:

☐ 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:

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	• Books/ e-books • Presentations • Reference Material • Audio / Video Modules	40:60
2	☒Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	40:60
3	☒Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	40:60
4	☒Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	40:60
5	☒Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	40:60
6	☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	40:60
7	☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	40:60

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ASC/N9803 – Organize work and resources (Manufacturing)	*Maintain safe and secure working environment*	**11**	**5**	**-**	**7**
	PC1. identify hazardous activities and the possible causes of risks or accidents in the workplace	2	1	-	2
	PC2. follow safe working practices while dealing with hazards to ensure safety of self and others	2	-	-	1
	PC3. carry out routine check of the machine for identifying potential hazards	2	1	-	1
	PC4. use appropriate protective clothing/equipment for specific tasks and work	2	1	-	1
	PC5. follow safety hazards and preventive techniques during fire drill	2	1	-	1
	PC6. report any identified breaches in health, safety and security policies and procedures to the designated person	1	1	-	1
	Health and hygiene	**7**	**5**	-	**2**
	PC7. ensure workstation and equipment are regularly clean and sanitized	2	2	-	1
	PC8. clean hands with soap, alcohol-based sanitizer regularly	1	1	-	1
	PC9. avoid contact with ill people and self-isolate in a similar situation	1	-	-	-
	PC10. wear and dispose PPEs regularly and appropriately	1	-	-	-
	PC11. report advanced hygiene and sanitation issues to appropriate authority	1	1	-	-
	PC12. follow stress and anxiety management techniques	1	1	-	-
	Perform work as per quality standards	**5**	**3**	-	**2**
	PC13. ensure that work is accomplished as per the requirements within the specified timeline	2	2	-	1
	PC14. ensure team goals are given preference over individual goals	3	1	-	1
	Effective waste management practices	**15**	**10**	-	**4**
	PC15. follow the fundamentals of 5S for waste management	3	2	-	1
	PC16. segregate waste into different categories	2	1	-	-
	PC17. follow processes specified for disposal of hazardous waste	2	2	-	1
	PC18. identify recyclable, non-recyclable and hazardous waste	4	2	-	1
	PC19. dispose non-recyclable, recyclable and reusable waste appropriately at identified location	4	3	-	1
	Material/energy conservation practices	**12**	**7**	-	**5**
	PC20. identify ways to optimize usage of material in various tasks/activities/processes	2	1	-	1
	PC21. check for spills/leakages in various tasks/ activities/ processes	2	1	-	1
	PC22. plug spills/leakages and escalate to appropriate authority if unable to rectify	2	1	-	-
	PC23. check if the equipment/machine is functioning normally before commencing work and rectify wherever required	2	2	-	1

	PC24. report malfunctioning (fumes/ sparks/ emission/ vibration/noise) and lapse in maintenance of equipment	2	1	-	1
	PC25. ensure electrical equipment and appliances are properly connected and turned off when not in use	2	1	-	1
	Total Marks	**50**	**30**	**-**	**20**
ASC/N3619 – Perform electric vehicle assemblyoperations	*Interpret information from various views, projection, 2D and 3D shapes*	**21**	**11**	-	**10**
	PC1. interpret engineering drawing's uniqueness, dimensions and important features in 2D and 3D shapes	5	3	-	2
	PC2. identify the difference between 2D and 3D shapes	4	2	-	2
	PC3. explain difference between first angle projection and third angle projection in mechanical engineering drawing	4	-	-	2
	PC4. interpret all the 3 axes (x, y and z axis) and geometrical shapes (cones, cylinder, sphere, cuboid, etc.) on to a 2D and 3D projection	5	3	-	2
	PC5. identify details of the machine component which are not clearly visible by interpreting section views	3	3	-	2
	Identify drawing standards and symbols	**23**	**15**	-	**8**
	PC6. Interpret Geometric Dimensioning and Tolerancing (GD&T) symbols in the drawings	6	4	-	2
	PC7. interpret symbols of Radius, controlled radius, spherical radius, diameter, spherical diameter, square, counterbore, spotface, depth, countersink, “by”, maximum dimension, minimum dimension, reference, dimension origin etc.	6	4	-	2
	PC8. identify the sequence of operations which enables the selection and prioritization of the datums	5	3	-	2
	PC9. read and interpret information from Tolerance Zone boundaries for part features in terms of shape and size	6	4	-	2
	Modification and storage of drawing	**6**	**4**	-	**2**
	PC10. observe any modification, changes required in the drawing and communicate the same to the concerned team in the organization	3	2	-	1
	PC11. store the drawings in an easily accessible place, avoiding damage from moisture, chemicals and fire	3	2	-	1
	Total Marks	**50**	**30**	**-**	**20**
ASC/N3619 – Perform electric vehicle assembly operations	*Perform pre-assembly activities*	**14**	**16**	**-**	**8**
	PC1. identify the work to be done by interpreting the assembly drawing/work instructions/SOPs	1	1	-	1
	PC2. select the appropriate method of assembly on the basis of drawing information	1	1	-	1
	PC3. identify the tools, measuring instruments, equipment, auto components/parts and sub- assemblies as per the SOP and job requirements	3	3	-	2
	PC4. check the assembling tools, accessories, measuirng instruments and equipment for any defects and clean dust and impurities from them before use	2	2	-	2
	PC5. check the terminals of battery and clean them by oxidants	1	1	-	1

	PC6. fill CLRI (clean, lubricate, retighten & inspection) check sheet and report to the supervisor about any abnormalities identified and action taken to resolve them	1	2	-	1
	PC7. setup the equipment required as per the selected assembling method	2	2	-	-
	PC8. ensure that the right programme is selected in case of robotic assembly method as defined in the SOP	1	1	-	-
	PC9. lift the auto component manually or by hoist and place the same securely on the designated slot/space as indicated in the drawing/work instructions	1	2	-	-
	PC10. check adhesion of roof-lining, insulation material, roof-rail etc. of the auto component	1	1	-	-
	Conduct the assembly operation	**9**	**20**	-	**7**
	PC11. follow safety practices during assembly process as per organisational SOP	1	1	-	1
	PC12. perform assembly operations and assemble the semi-precision and safety parts i.e. bearings, shafts, battery systems, motors such as electric wire harness, Electronic Control Unit (ECU), automatic lock system and other similar parts	2	5	-	2
	PC13. perform installation of the Oil and Lube systems by placing and fitting the funnel, filters, hose pipes, glands, sockets, suction guns and regulator valves as prescribed in the Work Instructions/ SOPs/Control Plans	2	4	-	1
	PC14. adjust, align and set (gap and flushness) semi- precision parts, assemblies and aggregates by following Product Quality Standard (PQS)	2	4	-	1
	PC15. ensure that there is no leakage of water, oil, air etc. where the battery system has to be placed in the assembly	-	1	-	1
	PC16. carry out numbering of the wires connected to the batteries during the assembly process	-	1	-	-
	PC17. carry out sealing of the required areas to prevent any leakage of water/air etc. during the usage of the component	1	2	-	-
	PC18. carry out labeling on the auto components like High voltage sticker indication etc. specifying the information related to assembly process and quality standards followed	1	2	-	1
	Conduct the post-assembly operations	**7**	**14**	-	**5**
	PC19. apply appropriate lubricant on the component as per manufacturer's specifications	1	2	-	1
	PC20. check and confirm that battery charge, battery water, brake oil, gear oil, engine oil etc. are filled as per the required volume and type	1	3	-	1
	PC21. check the assembled auto components as per the control plan, work instructions for product quality	1	2	-	-
	PC22. inspect the final assembly for defects such as loose electrical connections, battery leakage, improper use and placement of electronic components i.e. battery, motor, ECU, sensors & actuators and body surface for paint, dents, grooves, cracks, rough edges, improper part clearances etc.	1	2	-	1
	PC23. check the current in the battery, using multimeter	1	1	-	-

	PC24. store the tools, equipment and fixtures by following organisational policies and procedures after completion of work	1	2	-	1
	PC25. dispose scrap or waste material into the disposal area in accordance with the company's policies and environmental regulations	1	2	-	1
	Total Marks	**30**	**50**	**-**	**20**
DGT/VSQ/N0102 - Employability Skills (60 hours)	*Introduction to Employability Skills*	**1**	**1**	**-**	**-**
	PC1. identify employability skills required for jobsin various industries	-	-	-	-
	PC2. identify and explore learning andemployability portals	-	-	-	-
	Constitutional values – Citizenship	**1**	**1**	**-**	**-**
	PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. andpersonal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
	PC4. follow environmentally sustainable practices	-	-	-	-
	Becoming a Professional in the 21st Century	**2**	**4**	**-**	**-**
	PC5. recognize the significance of 21st CenturySkills for employment	-	-	-	-
	PC6. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, 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	-	-	-	-
	Basic English Skills	**2**	**3**	**-**	**-**
	PC7. use basic English for everyday conversationin different contexts, in person and over the telephone	-	-	-	-
	PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
	PC9. write short messages, notes, letters, e-mailsetc. in English	-	-	-	-
	Career Development & Goal Setting	**1**	**2**	**-**	**-**
	PC10. understand the difference between job andcareer	-	-	-	-
	PC11. prepare a career development plan withshort- and long-term goals, based on aptitude	-	-	-	-
	Communication Skills	**2**	**2**	**-**	**-**
	PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
	PC13. work collaboratively with others in a team	-	-	-	-
	Diversity & Inclusion	**1**	**2**	**-**	**-**
	PC14. communicate and behave appropriatelywith all genders and PwD	-	-	-	-
	PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
	Financial and Legal Literacy	**2**	**3**	**-**	**-**
	PC16. select financial institutions, products andservices as per requirement	-	-	-	-
	PC17. carry out offline and online financialtransactions, safely and securely	-	-	-	-
	PC18. identify common components of salary andcompute income, expenses, taxes, investments etc	-	-	-	-

	PC19. identify relevant rights and laws and uselegal aids to fight against legal exploitation	-	-	-	-
	Essential Digital Skills	**3**	**4**	**-**	**-**
	PC20. operate digital devices and carry out basicinternet operations securely and safely	-	-	-	-
	PC21. use e- mail and social media platforms andvirtual collaboration tools to work effectively	-	-	-	-
	PC22. use basic features of word processor,spreadsheets, and presentations	-	-	-	-
	Entrepreneurship	**2**	**3**	**-**	**-**
	PC23. identify different types of Entrepreneurshipand Enterprises and assess opportunities for potential business through research	-	-	-	-
	PC24. develop a business plan and a work model,considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
	PC25. identify sources of funding, anticipate, andmitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
	Customer Service	**1**	**2**	**-**	**-**
	PC26. identify different types of customers	-	-	-	-
	PC27. identify and respond to customer requestsand needs in a professional manner.	-	-	-	-
	PC28. follow appropriate hygiene and groomingstandards	-	-	-	-
	Getting ready for apprenticeship & Jobs	**2**	**3**	**-**	**-**
	PC29. create a professional Curriculum vitae(Résumé)	-	-	-	-
	PC30. search for suitable jobs using reliable offlineand online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
	PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
	PC32. answer questions politely, with clarity andconfidence, during recruitment and selection	-	-	-	-
	PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
	Total Marks	**20**	**30**	**-**	**-**
Grand Total		**150**	**140**		**60**

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 SDMS/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:
    - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
    - Check the duration of the training.
    - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
    - 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.
    - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
    - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
    - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
    - Question papers created by the Subject Matter Experts (SME)
    - Question papers created by the SME verified by the other subject Matter Experts
    - Questions are mapped with NOS and PC
    - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
    - Assessor must be ToA certified & trainer must be ToT Certified
    - Assessment agency must follow the assessment guidelines to conduct the assessment

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
    - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
    - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:
    - Surprise visit to the assessment location
    - Random audit of the batch
    - Random audit of any candidate

6. Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
- Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

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