QUALIFICATION FILE

Assistant Machine Operator - Plastics Extrusion

☒ 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

Submitted By:

Central Institute of Petrochemicals Engineering & Technology (CIPET)

Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India

CIPET Head office, T.V.K Industrial Estate, Guindy, Chennai – 600 032.

Table of Contents

Section 1: Basic Details

1.	**Qualification Name**	**Assistant Machine Operator - Plastics Extrusion (AMO-PE)**	
2.	**Sector/s**	**Chemicals & Petrochemicals (CPC)**	
3.	**Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐OEM**	**NQR Code & version of existing/previous qualification:** *(change to previous, once approved)* **2021/CP/CIPET/04614**	**Qualification Name of existing/previous version: Machine Operator Assistant - Plastics Extrusion**
4.	**a. OEM Name** **b. Qualification Name** (*Wherever applicable)*	**Not Applicable**	
5.	**National Qualification Register (NQR) Code &Version** (*Will be issued after NSQC approval)*	**QG-03-CP-04131-2025-V2-CIPET**	**6. NCrF/NSQF Level: Level 3**
7.	**Award (Certificate/Diploma/Advance Diploma/ Any Other** *(Wherever applicable specify multiple entry/exits also & provide details in annexure)*	**Certificate**	
8.	**Brief Description of the Qualification**	The individual is responsible for supporting the Machine Operator during the extrusion process and independently operating scrap grinders, blenders, high-speed mixers, and agglomerators.	
9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	**a. Entry Qualification & Relevant Experience:**	
10.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	**16**	**11. Common Cost Norm Category (I/II/III)** *(wherever applicable)*: **I**
12.	**Any Licensing requirements for Undertaking Training on This Qualification** *(wherever applicable)*	-	

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1.	Grade 10 pass	No Experience required
2.	Grade 8 pass with two year of (NTC/ NAC) after 8th	2 years of (NTC/ NAC)
3.	9th Grade pass	1.5 years relevant experience
4.	8th grade pass	3 years relevant experience

<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>150</td><td>300</td><td>30</td><td>-</td><td>480</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-2015/8142.0400</td></tr>
<tr><td>15.</td><td>Progression path after attaining the qualification (Please show Professional and Academic progression)</td><td colspan="2">Machine Operator in Plastics Extrusion Industry</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="2">Hindi</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">During selection of candidates for the training programme, Female candidates are given preference</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">Arunav Banerjee
Email: cipethovtc@cipet.gov.in Contact No.: 9402183512
Website: www.cipet.gov.in</td></tr>
<tr><td>23.</td><td>Final Approval Date by NSQC: 26.05.2025</td><td>24. Validity Duration: 3 Years</td><td>25. Next Review Date: 25.05.2028</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.	Basics Plastics Raw Materials, Additives, Master batches, pigments & Extrusion Concept	CPC/N0311 & V2.0	Core	3	4	30	90	-	-	120	20	60	-	-	80	-
2.	Maintain basic health and safety practices at the workplace, 5S.	CPC/N0411 & V2.0	Non-Core	3	1	10	20	-	-	30	10	30	-	-	40	-
3.	Plastics Compounding / Mixing, Scrap Grinding, Agglomerating	CPC / N0313 & V2.0	Core	3	3	30	60	-	-	90	10	40	-	-	50	-
4.	HDPE /PVC Pipe Extruder, Film Extruder & Extrusion Blow Moulding Machine Operation	CPC/N 0314 & V2.0	Core	3	4	30	90	-	-	120	20	80	-	-	100	-
5.	Reporting & Documentation	CPC/N 0315 & V2.0	Non-Core	3	1	10	20	-	-	30	10	40	-	-	50	-
6.	To Carry Out Quality Checks	CPC / N0316 & V2.0	Core	3	1	10	20	-	-	30	20	40	-	-	60	-
7.	Employability Skills	DGT/VSQ/N0101 & V1.0	Non-Core	3	1	30	-	-	-	30	10	10	-	-	20	-
8.	On the Job Training (OJT)	N/A	Core	3	1	-	-	30	-	30	-	-	-	-	-	-
Duration (in Hours) / Total Marks			-	-	**16**	**150**	**300**	**30**		**480**	**100**	**300**			**400**	

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:

50% for theory and 70% for practical *(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)*	Diploma with minimum 2 years experience in field of Plastics / Polymer Engineering / Technology
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	B.E. / B.Tech. / M.Sc. with 2 years experience in the field of Plastics / Polymer Engineering / Science
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**	Nil

Section 4: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Diploma with minimum 5 years experience in the field of Plastics / Polymer Engineering / Technology Or B.E. / B.Tech. with minimum 2 years experience in the field of Plastics / Polymer Engineering / Technology
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Diploma with minimum 6 years experience in the field of Plastics / Polymer Engineering / Technology Or B.E. / B.Tech. with minimum 3 years experience in the field of Plastics / Polymer Engineering / Technology
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	B.E. / B.Tech. with minimum 4 years experience in the field of Plastics / Polymer Engineering / Technology Or M.E. / M.Tech. with minimum 2 years experience in the field of Plastics / Polymer Engineering / Technology
4.	**Assessment Mode** *(Specify the assessment mode)*	Physical Assessment
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): NO**
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 validation provided: 5 Nos.**
5.	**Estimated nos. of persons to be trained and employed: 500 Candidates**
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 *(Mandatory)*	• Entry Qualification for this course is 10th or equivalent 8th standard with 2 years of (NTC/ NAC) 9th standard with 1.5 years relevant experience 8th standard with 3 years relevant experience • After successful completion of training, Trainee / Candidate is eligible for Shift Incharge/ Supervisor in Plastics Processing Industry (Level 3). • Job description: The assistant machine operator handles the recycling materials, sets up and operates the plastic processing machines, finishes the product & stores in the desired place.
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	1. **Classroom Equipment**: LCD Projector/Screen, Computer, PowerPoint Pointer, Study Material, Charts, Whiteboard & Duster, etc. 2. **Measuring Equipment**: Steel Ruler, Micrometer, Vernier Caliper, Radius Gauge, Feeler Gauge, Steel Measuring Tape, Weighing Balance, etc. 3. **Hand Tools:** Hammer, Screwdriver Set with Multiple Heads, Allen Key (Hexagonal),Twist Drill Bits, Triangular File, Adjustable Hacksaw, Double-Sided Spanner Set, Adjustable Spanner, Crimping Tools, etc. 4. **Personal Protective Equipment (PPE):** Safety Goggles, Rubber Gloves, Asbestos Gloves, Fire Extinguisher, Apron, Helmet, First Aid Box with Medicines 5. **Plastics Raw Material:** High-Density Polyethylene (HDPE), Polyvinyl Chloride (PVC) (Extrusion Grade) 6. **Mould & Die:** Die Head for HDPE Pipe, Die Head for PVC Pipe, Die for Blown Film, Moulds For Extrusion Blow Moulding. 7. **Extrusion Machines:** Pipe Extrusion Plant (HDPE) with Accessories, Pipe Extrusion Plant (PVC) with Accessories, Blown Film Extruder (Single Layer), Extrusion Blow Molding Machine, etc. 8. **Auxiliary Equipment:** Scrap Grinder, Automatic Hopper Loader, Blender High, Speed Mixer, Agglomerator**,** Weighing Scale, etc.
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	1. Criteria for assessment for each Qualification Document are being created by CIPET. 2. Each Assessable outcome (AO) will be assigned marks proportional to its importance in Learning Outcome and few performance criteria may be allotted marks in combine. 3. Each Learning outcome will be assessed both for theoretical knowledge and practical which is being proportionately demonstrated in the table below.

		4. The assessment for the theory part will be based on knowledge bank of questions created by CIPET which will contain multiple choice theory questions and Practical question database with mark allotment criteria. 5. To pass the Qualification Document, every trainee should score a minimum of 50 % in Functional and all Generic Learning Outcome's. 6. In case of successfully passing only certain number of Learning Outcome's, the trainee is eligible to take Subsequent assessment on the balance Learning Outcome's to pass the Qualification Document.
4.	**Annexure:** Assessment Strategy *(Mandatory)*	**Assessment strategy:** • Assessment criteria for Qualification Document have been developed. Each Learning outcome have separate marks for Theory and Practical Skills. • The Training Assessment Wing will have assessors who will not be associated with training activities and will be provided training on the said work. Thus it will ensure that the assessment carried out is fair and consistent. • Set of question bank developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get the unique set of question. • Student has to score minimum marks separately for theoretical and practical skill and overall percentage should also be 50% for theory and 70% for practical. • Empanelment of subject matter expert as assessor to assess trainee specifically on practical skills. • Assessments are preferably conducted by written examination papers in English/ regional languages according to the requirement. • It has been ensure that TP/trainer should not be present during assessment.
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	-
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	-
7.	**Annexure:** Acronym and Glossary *(Optional)*	-
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*Enclosed as Annexure-I*
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	*Enclosed as Annexure-II*
10.	**Supporting Document:** Occupational Map *(Mandatory)*	*Enclosed as Annexure-III*
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	*Enclosed as Annexure-IV*
12.	**Any other document you wish to submit:** Industry validation	*Enclosed as Annexure-V*

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 Assistant Machine Operator - Plastics Extrusion shall: ➢ Assist the machine operator in setting up and running the extrusion machine. ➢ Ensure availability of raw materials, additives, and consumables for production. ➢ Follow safety protocols and wear necessary PPE (gloves, goggles, etc.). ➢ Understand and follow SOPs and work instructions. ➢ Handle moulds, dies, and material feeding systems. ➢ Clean work areas and auxiliary equipment before and after the process. ➢ Identify and report any deviations in material quality or process parameters	Assistant Machine Operator Assistant role involves routine and predictable tasks such as ensuring material availability, checking PPE, and assisting in basic machine functions. The tasks require familiarity with plastics materials and extrusion processes but are limited in scope.	3
Professional and Technical Skills/ Expertise/ Professional Knowledge	The individual on the job must understand: ➢ Basic extrusion principles, machine startup & shutdown procedures. ➢ Types of plastics materials, additives, and grades used in extrusion. ➢ Functions of different extrusion machine components. ➢ Common defects in extruded products and how to identify them. ➢ Identify different plastics and their additives used in extrusion. ➢ Understand machine capacity and safety protocols. ➢ Perform basic maintenance and assist in quality control. ➢ Detect problems, discuss solutions with the operator, and follow instructions. ➢ Organize work orders, process manuals, and safety logs. ➢ Use problem-solving techniques for minor operational issues.	The role requires knowledge of fundamental extrusion processes and materials, focusing on basic machine operation and defect identification. The knowledge is factual and supports limited troubleshooting within predefined guidelines. The role involves routine and repetitive tasks using appropriate tools and methods. It requires problem detection and basic reasoning but minimal independent decision-making.	3
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	The individual must: ➢ Demonstrate an understanding of the properties of plastics and their behavior in the extrusion process. ➢ Operate basic tools and equipment used in plastics extrusion. ➢ Perform safety checks, identify hazards, and use appropriate PPE.	The role involves developing fundamental technical and safety skills in plastics extrusion while performing structured and supervised tasks. It requires basic problem-solving abilities and attention to detail.	3

	➢ Identify and troubleshoot minor issues in the extrusion process. ➢ Work efficiently under supervision and complete assigned tasks on time. ➢ Maintain accurate records of production parameters and raw material usage.		
Broad Learning Outcomes/Core Skill	The user/ individual on the job needs to know and understand how to: ➢ Read and comprehend safety signs, work instructions, and equipment manuals. ➢ Communicate effectively with team members and supervisors. ➢ Perform basic calculations related to material measurements and process parameters. ➢ Maintain proper documentation related to machine operation and material usage. ➢ Work collaboratively in a team and follow instructions precisely.	The role requires basic literacy, numeracy, and communication skills to execute assigned tasks efficiently while maintaining safety and quality standards.	3
Responsibility	The Assistant Machine Operator Plastics Extrusion is responsible for: ➢ Assisting in the efficient operation of the extrusion machine. ➢ Following established work procedures and maintaining a clean workspace. ➢ Identifying defects in extruded products and reporting them promptly ➢ Ensuring proper handling and storage of raw materials and tools. ➢ Demonstrating discipline, adherence to safety norms, and willingness to learn.	The role requires accountability for performing assigned tasks correctly and safely under supervision, contributing to the overall production efficiency.	3

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: Maximum 50 candidates per batch

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	Measuring equipments	Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gage, Steel measuring tape, Weighing Balance (1 No.)	As per requirement
2.	Hand Tools	Hammer,,Screwdriver Set with Multiple Heads,,Allen Key (Hexagonal),Twist Drill Bits,Triangular File,Adjustable Hacksaw,Double-Sided Spanner Set,Adjustable Spanner,Crimping Tools,etc.	As per requirement
3.	Personal Protective equipments	Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, First Aid Box with Medicines	As per requirement
4.	Plastics raw material	High-Density Polyethylene (HDPE), Polyvinyl Chloride (PVC) (Extrusion Grade)	As per requirement
5.	Mould	Die Head for HDPE Pipe ,Die Head for PVC Pipe, Die for Blown Film, Moulds For Extrusion Blow Moulding.	As per requirement
6.	Auxiliaries equipments	Scrap Grinder, Automatic Hopper Loader, Blender High, Speed Mixer, Agglomerator, etc.	As per requirement
7	Machines	Pipe Extrusion Plant (HDPE) with Accessories,Pipe Extrusion Plant (PVC) with Accessories, Blown Film Extruder (Single Layer), Extrusion Blow Moulding Machine, etc.	As per requirement

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. LCD Projector/Screen,
2. Computer
3. Charts
4. White board & Marker pen

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	Rajesh Industrial Corporation	Mr. Sunil Gupta	Proprietor	A-3, Industrial Area, Fatuha – 803 201	9113746514	Rajeshindustrial1@gmail.com	-
2	Keshav Industries	Mr. MD Shadab Azfar	Manager (QCI)	C-33, Patliputra Industrial Area, Patna - 800013	8298795466	Kikeshav1@gmail.com	-
3	Metroplast Industries	Mr. Atanu Kumar Das	Q. C. Manager	Kurunda, Near Kuruda Fly Over, NH-5, Balasore = 756056, Odisha	8847894040	Metro_plast@yahoo.com	-
4	Mukand Poly Products	Mr. Lakhyadhar Das	QCI	BIP, Plot No.: 38, Vill-Sila, Amingaon, Guwahati – 781 031	6002297488	mukandpoly@kukandgroup.in	-
5	Mahashkti Pipe Industries	Mr. Vivek Singh	Manager	Vill-Saidpurtola, P.O. – Karota, Patna – 803 202	9330000933	mahashaktipipe@gmail.com	-

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
2024-25	500	400	50	38	-	-
2025-26	600	480	60	49	-	-
2026-27	700	560	70	57	-	-

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
1.0	2021-22	204	204	204	169	31	31	31	25	-	-	-	-
1.0	2022-23	-	-	-	-	-	-	-	-	-	-	-	-
1.0	2023-24	46	46	46	39	12	12	12	10	-	-	-	-

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. CSR Scheme
2. PM-DAKSH Scheme

Content availability for previous versions of qualifications:

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

Languages in which Content is available: English & Hindi

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		
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: 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
1. CPC/N 0311: Basics Plastics Raw Materials, Additives, Master batches, pigments & Extrusion Concept	AO1. Understanding Types of Plastics used in Extrusion and Its Properties.	3	6		
	AO2. Types of Additives, Master batches and Pigments.	3	8		
	AO3. Storing and Handling of Raw Materials and House Keeping.	3	4		
	AO4. Types of Extruders Used in the Extrusion Process and their Parts.	2	8		
	AO5. Storing and Handling of Finished Products and House Keeping.	2	6		
	AO6. Types of Mixing and Compounding.	2	8		
	AO7. Measurement of Additives, Pigments and Materials.	1	6		
	AO8. Study and Operation of Scrap Grinding Machines, Blenders & Agglomerator.	1	4		
	AO9. Understanding Safety Equipments and Its Use.	1	4		
	AO10. Do's and Don't in Area of Operations.	1	2		
	AO11. Safety Precaution Majors before Operations.	1	4		
	Sub total	**20**	**60**		
2. CPC/N 0411 : Maintain basic Health , Safety Practices at workplace, 5S.	AO1. Wear protective clothing/equipment for specific tasks and work conditions	0.5	2		
	AO2. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	0.5	2		
	AO3. Apply good housekeeping practices at all times	0.5	2		
	AO4. Use the various appropriate fire extinguishers on different types of fires correctly	0.5	2		
	AO5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	0.5	2		
	AO6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the plant which are potentially hazardous/unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.	0.5	2		
	AO7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc, Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.	0.25	2		
	AO8. Create awareness amongst others by sharing information on the identified risks.	0.25	2		
	AO9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un- necessary items are not cluttering the workbenches or work surfaces.	0.5	2		

	AO10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions	0.5	1		
	AO11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP	0.5	1		
	AO12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	0.5	1		
	AO13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions	0.5	1		
	AO14. Ensure that areas of material storage areas are not overflowing	0.5	1		
	AO15. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required	0.5	1		
	AO16. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	0.5	1		
	AO17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	0.5	1		
	AO18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	0.5	1		
	AO19. Check that the items in the respective areas have been identified as broken or damaged	0.5	1		
	AO20. Follow the given instructions and check for leveling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	0.5	1		
	AO21. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions.	0.5	1		
	Sub total	**10**	**30**		
3. CPC/N 0313: Plastics Compounding / Mixing, Scrap Grinding, Agglomerating	AO1. Understanding Types of Chemicals, Additives and Colorants.	1	4		
	AO2. Formulation laid down for different Products.	1	4		
	AO3. Weighing and Batch Size.	0.5	2		
	AO4. Types of Blenders, Mixers and their Parts.	1	4		
	AO5. Preparation Batches as per the formulations.	1	4		
	AO6. Loading and unloading of Batches.	0.5	2		
	AO7. Temperature, Pressure and Speed involved in Blenders and Mixers.	0.5	2		
	AO8. Importance of each and every Parameters.	0.5	2		
	AO9. Precaution to be taken care during the batch preparation.	0.5	2		
	AO10. Storing of batches after preparation.	0.5	2		
	AO11. Types of Scrap Grinders and Agglomerator and their parts.	0.5	2		
	AO12. Operation & Trouble Shooting.	0.5	2		
	AO13. Storing, House Keeping, Safety while operation.	0.5	2		
	AO14. Understanding Safety Equipments and Its Use.	0.5	2		

	AO15. Do's and Don't in Area of Operation.	**0.5**	**2**		
	AO16. Safety Precaution Majors before Operations.	**0.5**	**2**		
	Sub total	**10**	**40**		
4. CPC/N 0314 : HDPE /PVC Pipe Extruder , Film Extruder & Extrusion Blow Moulding Machine Operation	AO1. Types of HDPE / PVC Extruders & their Parts.	2	12		
	AO2. Types of Film Extruders & their Parts.	2	12		
	AO3. Starting up & Shutting Down Process.	2	6		
	AO4. Threading (Initial Take up) of Pipes, Films & Extrusion Blow Moulding	2	8		
	AO5. Safety Precaution taken during assembling and disassembling.	2	5		
	AO6. Material Loading and Handling.	2	5		
	AO7. Finished Products Segregation & Stacking.	2	5		
	AO8. Post Production Operation.	2	12		
	AO9. Understanding Safety Equipments and Its Use.	2	5		
	AO10. Do's and Don't in Area of Operations.	1	5		
	AO11. Safety Precaution Majors before Operations.	1	5		
	Sub total	**20**	**80**		
5. CPC/N 0315 : Reporting & Documentation	AO1. Report data/problems/incidents as per the laid down procedure in the prescribed format and registers.	1	4		
	AO2. Report to the appropriate authority as laid down by the company procedure.	1	6		
	AO3. Identify documentation to be completed relating to the job profile.	1	6		
	AO4. Record details accurately in an appropriate format.	2	6		
	AO5. Complete all documentation within stipulated time according to company procedure.	2	4		
	AO6. Make sure documents are available to all appropriate authorities to inspect.	1	4		
	AO7. Respond to requests for information in an appropriate manner whilst following organizational procedures.	1	4		
	AO8. Inform the appropriate authority of requests for information received.	1	4		
	Sub total	**10**	**38**		
6. CPC/N 0316 : To Carry Out Quality Checks	AO1. Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts.	2	2		
	AO2. Use appropriate measuring instruments, equipment, tools, accessories etc., as prescribed / required.	2	4		
	AO3. Identify non-conformities to quality assurance standards.	2	4		
	AO4. Identify potential causes of non-conformities to quality assurance standards.	2	4		
	AO5. Identify impact on final product due to non-conformance to prescribed Standards.	2	4		
	AO6. Evaluating the need for action to ensure that problems do not reoccur.	1	4		
	AO7. Suggest corrective action to address problem.	1	2		
	AO8. Review effectiveness of corrective action.	1	2		

	AO9. Interpret the results of the quality check correctly.	1	2		
	AO10. Take up results of the findings with QC in charge/appropriate authority.	1	2		
	AO11. Take up the results of the findings within stipulated time.	1	2		
	AO12. Record of results of action taken.	1	2		
	AO13. Record adjustments not covered by established procedures for future reference.	1	2		
	AO14. Review effectiveness of action taken.	1	2		
	AO15. Follow reporting procedures where the cause of defect cannot be identified.	1	2		
	Sub total	**20**	**40**		
7. DGT/VSQ/N0101 Employability Skills	AO1. Discuss the importance of Employability Skills in meeting the job requirements.	1	1		
	AO2. Use appropriate basic English sentences/phrases while speaking, Demonstrate how to communicate in a well -mannered way with others & working with others in a team.	1	1		
	AO3. Discuss the significance of using financial products and services safely and securely. Explain the importance of managing expenses, income, and savings & Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws.	2	2		
	AO4. Discuss the significance of using the internet for browsing, accessing social media platforms, safely and securely.	1	1		
	AO5. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges.	2	2		
	AO6. Differentiate between types of customers & Explain the significance of identifying customer needs and addressing them.	2	2		
	AO7. Create biodata, use various sources to search and apply for jobs & Discuss the significance of dressing up neatly and maintaining hygiene for an interview.	1	1		
	Sub total	**10**	**10**		
	Grand Total	**100**	**298**		

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 are assigned to Training Assessment Wing (TAW), CIPET HO for planning of assessment
   - Training Centers request TAW for Assessment and Certification of Trainees
   - TAW identifies suitable assessor and nominates the assessor to the respective Training Centre
   - TAW monitors the assessment process
   - Training Centers maintain necessary 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 or 1 Assessor for 2 days.
   - 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
   - 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 defines 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