



QUALIFICATION FILE

Operator - Plastic Extrusion Machine

Short Term Training (STT) Long Term Training (LT) Apprenticeship
 Upskilling Dual/Flexi Qualification For ToT For ToA

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

NCrF/NSQF Level: 4

Submitted By:

Rubber, Chemical & Petrochemical Skill Development Council (RCPSDC)

304, 3rd Floor, Rectangle One, Saket District Center,

New Delhi – 110017 (India)

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Section 1: Basic Details

1. Qualification Name	Operator - Plastic Extrusion Machine																				
2. Sector/s	Chemical and Petro-chemical (CPC)																				
3. Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: (change to previous, once approved)	Qualification Name of existing/previous version:																			
4. a. OEM Name b. Qualification Name (Wherever applicable)																					
5. National Qualification Register (NQR) Code & Version (Will be issued after NSQC approval)	2022/CP/RCPSDC/06963	6. NCrF/NSQF Level: 4																			
7. Award (Certificate/Diploma/Advance Diploma/ Any Other (Wherever applicable specify multiple entry/exists also & provide details in annexure)	Certificate																				
8. Brief Description of the Qualification	The individual is involved in operating the extrusion machineries and performing various extrusion activities.																				
9. Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	<p>a. Entry Qualification & Relevant Experience:</p> <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 1st year of 3-year diploma (after 10th) and pursuing regular diploma</td> <td></td> </tr> <tr> <td>2</td> <td>10th Grade pass with 1-year NTC/ NAC</td> <td></td> </tr> <tr> <td>3</td> <td>10th Class Pass</td> <td>2 years of relevant</td> </tr> <tr> <td>4</td> <td>8th Grade Pass plus 2-year NTC plus 1-year NAC</td> <td></td> </tr> <tr> <td>5</td> <td>8th pass plus 1-year NTC plus 1-year NAC plus NITC</td> <td></td> </tr> </tbody> </table> <p>b. Age: 18 years</p>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	Completed 1 st year of 3-year diploma (after 10 th) and pursuing regular diploma		2	10 th Grade pass with 1-year NTC/ NAC		3	10 th Class Pass	2 years of relevant	4	8 th Grade Pass plus 2-year NTC plus 1-year NAC		5	8 th pass plus 1-year NTC plus 1-year NAC plus NITC	
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)																			
1	Completed 1 st year of 3-year diploma (after 10 th) and pursuing regular diploma																				
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3	10 th Class Pass	2 years of relevant																			
4	8 th Grade Pass plus 2-year NTC plus 1-year NAC																				
5	8 th pass plus 1-year NTC plus 1-year NAC plus NITC																				
10. Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	17	11. Common Cost Norm Category (I/II/III) (wherever applicable): I																			

12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																							
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> 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>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>162:00</td> <td>288:00</td> <td>60:00</td> <td>-</td> <td>510:00</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>(Refer Blended Learning Annexure for details)</p>						Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	162:00	288:00	60:00	-	510:00	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																				
Classroom (offline)	162:00	288:00	60:00	-	510:00																				
Online																									
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	NCO-2015/8142																							
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Extrusion Supervisor, Production Manager																							
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																							
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:																							
18.	Is the Job Role Amenable to Persons with Disability	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																							
19.	How Participation of Women will be Encouraged	No gender sensitization																							
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 1. RSC/N5603 – Follow Ethical and Sustainable Practices at Workplace																							
21.	Is Qualification Suitable to be Offered in Schools/Colleges	<input type="checkbox"/> Schools <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Colleges <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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: Saif Mohammad Email: ceo@rcpsdc.in Website: http://rcpsdc.in/ Contact No.: 011 41004899																							
23.	Final Approval Date by NSQC: 25/08/2022	24. Validity Duration: 3 Years			25. Next Review Date: 25/08/2025																				

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.	Perform pre-startup activities for extrusion process	RSC/N8021 & V1.0	Core	4	2	30	30	00	00	60	40	60	0	0	100	20
2.	Perform plastic extrusion process	RSC/N8022 & V1.0	Core	4	6	60	120	00	00	180	40	60	0	0	100	15
3.	Perform maintenance activity	RSC/N8023 & V1.0	Core	4	2	20	40	00	00	60	40	60	0	0	100	15
4.	Coordinate and communicate effectively at the workplace	RSC/N5610& V1.0	Non - Core	4	1	10	20	00	00	30	40	60	0	0	100	10
5.	Carry out housekeeping	RSC/N5001 & V3.0	Non - Core	4	1	10	20	00	00	30	40	60	0	0	100	10
6.	Carry out health and safety	RSC/N5007 & V3.0	Non - Core	4	1	10	20	00	00	30	30	70	0	0	100	10
7.	Follow ethical and sustainable practices at the workplace	RSC/N5603 & V1.0	Non - Core	4	1	10	20	00	00	30	40	60	0	0	100	10
8.	Employability Skills (30 Hours)	DGT/VSQ/N0101 & V1.0	Non - Core	2	1	12	18	00	00	30	20	30	0	0	50	10
9.	OJT		Core	4	2	00	00	60	00	60						

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)
	Duration (in Hours) / Total Marks				17	162	288	60	00	510	290	460	0	0	750	100

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: 70 % (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 in any stream of Engineering with 3 years of industrial experience.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	ITI in any stream of Engineering with 5 years of industrial experience.
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	NA

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in any stream of Engineering with 5 years of industrial experience.
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in any stream

3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma in any stream of Engineering with 5 years of industrial experience.
4.	Assessment Mode (Specify the assessment mode)	Blended
5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> 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): Work in progress
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Work in progress
3.	Government /Industry initiatives/ requirement (Yes/No): 30 Industry validation
4.	Number of Industry validation provided: 30
5.	Estimated nos. of persons to be trained and employed: Work in progress
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Mail shared

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")	Attached
6.	Annexure: Multiple Entry-Exit Details (Mandatory, in case qualification has multiple Entry-Exit)	Attached
7.	Annexure: Acronym and Glossary (Optional)	Attached
8.	Supporting Document: Model Curriculum (Mandatory – Public view)	Attached

9.	Supporting Document: Career Progression (Mandatory - Public view)	Attached
10.	Supporting Document: Occupational Map (Mandatory)	-
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
Process	<p>Job that requires well developed skill, with clear choice of procedures in familiar context.</p> <ul style="list-style-type: none"> • Perform pre-startup activities • Perform extrusion process • Perform maintenance activities • Carry out housekeeping • Carry out health and safety • Follow ethical and sustainable practices at the workplace 	<p>An Operator – Plastic Extrusion Machine should be able to operate the extrusion machineries and performing various extrusion activities.</p> <p>Hence Level 4</p>	4
Professional knowledge	<p>Knowledge of facts, principles, processes and general concepts, in a field of work or study.</p> <ul style="list-style-type: none"> • Discuss different type of extrusion processes • Discuss properties and application of various plastics materials and plastic processing • Describe the ways to set up extrusion machine and its parameters • Describe the ways to mix plastic material and additives • Explain the methods for in-process inspection of machine operation and process. • Explain procedures for operating extrusion apparatus • Describe hazard and control measures associated with using extrusion process, including housekeeping • Discuss standard policies on behavioural etiquette, professionalism and gender sensitive 	<p>An Operator - Plastic Extrusion Machine should have factual knowledge of the sector like, different types of chemicals and disinfect, procedure to interpret process, methods to prepare the chemicals and operate and maintain a wastewater treatment plant, standard procedure to escalate issues/problems, etc.</p> <p>Hence Level 4</p>	4

	<p>service practices at workplace and hierarchy and reporting structure</p> <ul style="list-style-type: none"> • List key helpline number • Explain effective ways of team coordination • Discuss health, safety and environment guidelines, legislation and regulations, knowledge of do's and don'ts and importance of Personal Protective Equipment (PPE) • Outline the importance of optimal utilization of resources and providing feedback for improvement • Explain the procedures for disposing off waste and personal protective equipment • Describe the correct method for cleaning equipment and/or machinery used for the cleaning activities • Discuss the methods for minimizing environmental damage during work and risks of health and safety at workplace • Explain the standard procedure to use machines, materials and equipment • Describe the process of reporting accidents, incidents and problems to appropriate authorities • Elaborate the process of contact of local emergency services, emergency evacuation process and first aid procedures to be followed • Describe the methods to handle hazardous materials, tools and equipment • Outline the importance of good housekeeping and maintaining safe and secure work area at workplace • State the importance of following organizational standards and guidelines related to PwD 		
Professional skill	<p>A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.</p>	<p>An Operator–Plastic Extrusion Machine should have practical skills to perform tasks that require cognitive as well as practical knowledge. This person applies a range of cognitive and practical skills required to</p>	4

	<ul style="list-style-type: none"> • Apply problem-solving approach prior to resolve difficulties • Communicate with all stakeholders in a polite and courteous manner using effective communication skills • Adopt problem-solving approach • suggest solutions to improve work processes • Seek clarification as and when required • Make timely decisions for efficient utilization of resources • Identify cause and effect of greening of jobs • Maintain data on waste disposal at workplace • Ensure punctuality, proper utilization of time and management workload efficiently • Provide support in dealing with stress and anxiety help colleagues to work efficiently • Create awareness about maintaining hygiene at workplace 	<p>accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information.</p> <p>Hence Level 4</p>	
Core skill	<p>Desired mathematical skill; understanding of social, political; and some skill of collecting and organising information, communication.</p> <ul style="list-style-type: none"> • Read and interpret job related documents, written instructions • Note down the information communicated by the supervisor • Communicate effectively with supervisor and team members • Write in English/regional language and complete written work with attention to detail 	<p>An Operator – Plastic Extrusion Machine must be attentive, focused, disciplined and able to plan and prioritize tasks effectively. The individual must possess manual dexterity and be capable of performing routine works accurately.</p> <p>Hence Level 4</p>	4
Responsibility	<p>Responsibility for own work and learning and some responsibility for others' works and learning.</p> <ul style="list-style-type: none"> • Confirm work requirements • Prepare for extrusion work • Operator extruder and other related apparatus • Complete extrusion operations 	<p>An Operator - Plastic Extrusion Machine is responsible for preparing for work requirements and performing chemical effluent treatment plant operations as per the organisational standards. This person take responsibility for own work and learning.</p> <p>Hence Level 4</p>	4

	<ul style="list-style-type: none"> • Communicate effectively with colleagues and seniors • Coordinate with cross-functional teams • Prepare for housekeeping practices • Carry out housekeeping operations • Perform post housekeeping activities • Maintain safe and efficient workplace • Follow appropriate emergency procedures • Comply with standard safety procedures • Participate in safety awareness campaigns • Adopt resource conservation practices (Greening) • Follow effective waste management practices • Display behavioural Skills at workplace • Adopt workplace practices and policies respecting gender and ability differences 		
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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	Work Order	As per Industry Standards	1
2	Manufacturing drawing/ blueprint	As per Industry Standards	10
3	Toolbox	With different sizes of round and open-ended spanner	5
4	Worktable	With Vice	5
5	Hammer	Plastic and Steel	5 each
6	Allen Key	Set	5
7	Moulds	Simple and Complex	5 each
8	Clamps for mounting moulds	As per Industry Standards	5
9	Grease	As per Industry Standards	1
10	Silicon spray	As per Industry Standards	1
11	Rail girder	With chain pulling block	1
12	Raw Material	PE, PVC, Polystyrene, Nylon 6/6	As required
13	Oven	As per Industry Standards	1
14	Cutter and Blade	As per Industry Standards	5 each
15	Extruder with Die	As per Industry Standards	2
16	Blow Moulding Machine	As per Industry Standards with lower welding function	1

18	Vernier Caliper	As per Industry Standards	5
19	Micrometer	As per Industry Standards	5
20	Height Gauge	As per Industry Standards	5
21	Surface Plate	As per Industry Standards	5
22	CMM	As per Industry Standards	1
23	Lifting device	Hoists, cranes, bins, part trolleys, pallet trucks	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Whiteboard
2. Flip Chart
3. Duster
4. Projector
5. Projector screen
6. Computer/ Laptop with charger
7. Power Point Presentation
8. 2.1 Laptop External Speakers
9. Training kit (Trainer guide, Presentations)
10. Participant Handbook and Related Standard Operating Procedures
11. Markers
12. Chalk

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	Indian Peroxide Ltd.	Mr. Sachin Tyagi	Assistant Manager (Maintenance & Utility)	-	9098048284	sachin@indianperoxide.com	-
2	Jayshree Aeromatics Pvt Ltd.	Mr. Hiren Patel	Director	-	9727711325	hiren@jayshreeind.com	-
3	K.A Malle Pharma Company Ltd.	Mr. Deepak Dubey	Factory Manager	-	7211191914	deepak@kamalle.com	-

4	Malviya Chemicals & Pharmaceuticals Pvt Ltd.	Mr. A.K Verma	Plant Incharge	-	9891151995	malpharma@gmail.com	-
5	Meridian Chem Bond Pvt Ltd.	Mr. Mayur Patel	Electrical Engineer	-	9913602464	project@meridianchembond.in	-
6	Norris Ltd.	Mr. Rutul Davawala	GM-Quality	-	9925234151	rutuldavawala@yahoo.com	-
7	Panama Petrochem Ltd	Mr. P.V Nikam	Vice President - Technical	-	9824114608	nikam@panamapetro.com	-
8	Ramdev Chemical Industries	Mr. Bhavin Bhalani	Manager Purchase	-	8460430112	conference@ramdevpigments.com	-
9	Shyam Chemicals Private Limited	Mr. Akshay Anand	Officer	-	9033015841	hr@shyamchemicals.com	-
10	Vihita Chem Private Limited	Mr. Rajesh Patni	General Manager Operitions	-	9909945372	rajesh.patni@vihita.com	-
11	Beauty Art Print India Pvt Ltd.	Mr. Lal Vihari Maurya	Maintenance Manager	-	9318449936	lalviharmaurya71@gmail.com	-
12	Chemico Chemicals Pvt Ltd.	Mr. Jagdish Dimri	Manager	-	9910412055	Chemical@chemicochemicals.com	-
13	Chirag Chemicals	Mr. Chirag Chhabra	Owner	-	7838200210	chirag.chhabra23@gmail.com	-
14	Narayan Organics Pvt Ltd.	Mr. Tejas Rajyaguru	Admin	-	9427691305	tejas.guru009@gmail.com	-
15	Perfect Chemicals	Mr. Vithelbhai Padariya	Partner	-	9487818400	perfectchemicals2014@gmail.com	-
16	Suleshvari	Mr. Kamlesh Laxmichand Patel	CEO	-	8037528808	suleshvaripharma@yahoo.co.in	-
17	Aagam Life Sciences Pvt Ltd.	Mr. Piyush Sjitra	Director	-	8866468464	aagamlifescience@gmail.com	-
18	Axiom Chemicals Pvt Ltd.	Mr. Amit Parikh	Director	-	8047016134 / 8048956817	sales@axiomchemicals.com	-
19	Chandan Chemicals	Mr. Dharmesh Tamakuwala	Senior Officer	-	9586270444	euraminedaxesh2011@gmail.com	-
20	Deep Pharmchem Pvt Ltd.	Mr. G.S Phalak	Supervisor	-	9429035944	info@deeppharm.com	-
21	Macson Products	Mr. Sagar Patel	Production Manager	-	8735082582	unit2@macsonproducts.com	-
22	Mayur Colour & Chemicals	Mr. Arpit Saualia	Owner	-	8048361271	mayurdyem98251@gmail.com	-
23	Mittal Dyes & Chemicals	Mr. Deepak Gupta	Plant Manager	-	9210764767	mittal.dyes@gmail.com	-

24	Pragna Chemical Industries	Mr. Mahesh Patel	Partner	-	9824125040	info@pragnagroup.com	-
25	Sayan Greenochem Pvt Ltd.	Mr. Dharmendra	Plant Incharge	-	7984464919	dh210@gmail.com	-
26	Shree Ambe Colour Chem	Mr. Lav Patel	Owner	-	9687250299	shreeambecolourchem@yahoo.com	-
27	Shree Vardayini Chemical Industries Pvt Ltd.	Mr. Jignesh Pandya	Clerk/Admin	-	7359332555	info@vardayini.com	-
28	Sodar Industries	Mr. D.M Patel	Owner	-	9824451381	dahyabhaipatel@sanchar.net.in	-
29	SPA VET - MIN (P) Ltd	Mr. Salim Sherani	Director	-	9904072402	suhel7@gmail.com	-
30	Umiya Chem Intermediates	Mr. Vinod Patel	Partner	-	9824148130	umiya_chem_amk@yahoo.com	-

Annexure: Training & Employment Details

Training and Employment Projections: Work in progress

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities

Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools: Blended (only theory)

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	<input checked="" type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	<ul style="list-style-type: none"> Books/ e-books Presentations 	50:50

		<ul style="list-style-type: none"> • Reference Material • Audio / Video Modules 	
2	<input checked="" type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	<ul style="list-style-type: none"> • Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content 	50:50
3	<input checked="" type="checkbox"/> Showing Practical Demonstrations to the learners	<ul style="list-style-type: none"> • Video Content • E-Resource library • AR/ VR/ XR 	50:50
4	<input checked="" type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	<ul style="list-style-type: none"> • Training tools (tools list attached) • Video Play • Presentations 	50:50
5	<input checked="" type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice	<ul style="list-style-type: none"> • Online Question Bank • Mobile Quick test app • MCQ based tests 	50:50
6	<input checked="" type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	<ul style="list-style-type: none"> • Assessment engine for Essays • Up-loadable file examinations • Mock test sessions 	50:50
7	<input checked="" type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	<ul style="list-style-type: none"> • Online tests • Offline assessments 	50:50

Annexure: Detailed Assessment Criteria

xDetailed 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
RSC/N8021: Perform pre-startup activities for extrusion process	<i>Perform pre-startup activities for plastic extrusion work</i>	40	60	-	-
	PC1. use appropriate Personal Protective Equipment (PPE) for safe working in shopfloor	1	2	-	-
	PC2. follow work requirements and job specifications as mentioned in the production plan	2	4	-	-
	PC3. check all equipment i.e. extruder machine, blender/mixer etc. are operational and functioning properly before starting work	5	7	-	-
	PC4. arrange the raw material (plastic granules) and additives/masterbatches as per the production plan and job requirements	4	6	-	-

	PC5. perform pre-heating of raw material (plastic granules) to remove the moisture content (if needed)	4	6	-	-
	PC6. measure the quantity of raw material and additives/ masterbatches as per the formulation mentioned in production plan and ensure that the correct ratio of raw material and additives/masterbatches are put in the mixer/blender	4	6	-	-
	PC7. set the blenders/mixers and their parameters as per the SOP	4	6	-	-
	PC8. perform mixing of raw material, additives/masterbatches etc. in blenders/ mixers as per job specification	5	7	-	-
	PC9. set the extruder parameters as per the job requirements/ SOP	5	7	-	-
	PC10. carry out gap setting of die in the machine as per SOP, if required	4	6	-	-
	PC11. report any issues faced (if any) during the preparatory activities to the supervisor	2	3	-	-
	Total Marks	40	60	0	0
	<i>Perform extrusion process activities</i>	28	42	-	-
	PC1. adhere to all safety norms (such as wearing protective gloves and shoes, etc.) in accordance with the international/ national and organisational standards	1	1	-	-
RSC/N8022: Perform plastic extrusion process	PC2. follow SOP for shift changeover	2	2	-	-
	PC3. follow SOP for heating the extruder prior to feeding raw material as per SOP	3	5	-	-
	PC4. feed the raw material in the extruder machine as per job requirement and observe the feeding operation for any abnormality	2	3	-	-
	PC5. start the extruder machine and monitor the operation to ensure process stabilisation and machine operation according to equipment specifications and job requirements	3	5	-	-
	PC6. follow in process inspection and adjust the parameters of machine if required to get the desired specifications	2	3	-	-
	PC7. run the machine for mass production once the process starts running smoothly and giving desired quality	4	5	-	-
	PC8. monitor and maintain supply of input material(s) to support continuous operation of equipment	1	2	-	-
	PC9. perform in-process checking of machine operation and process parameters at regular intervals as per SOP to maintain the required quality and product specification	4	5	-	-
	PC10. in-process inspection defects/ issues to be addressed as per SOP	1	2	-	-

	PC11. note down the observations of the inspection and identify rolls that are as per the specified standards	1	2	-	-
	PC12. follow shutdown procedures in case of any emergency/ normal process as per the SOP	1	2	-	-
	PC13. report any emergencies/issues to the supervisor immediately by following organisational procedures	3	5	-	-
	<i>Perform batch marking, sampling and storage of product</i>	12	18	-	-
	PC14. carry out labelling i.e. batch marking/ coding on the extruded rolls as per SOP	3	4	-	-
	PC15. send samples of extruded rolls in specified form to lab for quality check and testing	2	3	-	-
	PC16. tag and store rolls by following SOP	2	3	-	-
	PC17. clean the equipment properly as per SOP after completion of work	2	3	-	-
	PC18. dispose waste material into the disposal area in accordance with the company's policies and environmental regulations	1	2	-	-
	PC19. update and maintain the log book with details of production output, plastic usage, lot number, compound code, batch number etc. to facilitate the traceability	2	3	-	-
Total Marks		40	60	0	0
RSC/N8023: Perform maintenance activity	<i>Perform machine maintenance</i>	40	60	-	-
	PC1. adhere to all safety norms (such as wearing protective gloves and shoes, etc.) in accordance with the international/ national and organisational standards	2	3	-	-
	PC2. determine the routine maintenance requirements of equipment by interpreting manufacturer manual, maintenance schedule, work instructions, etc.	4	6	-	-
	PC3. arrange tools, consumables, spare parts, etc. required for performing repair and maintenance	5	3	-	-
	PC4. shut down the machine properly as per SOP	2	3	-	-
	PC5. clear the work area thoroughly to ensure no unwanted materials are present before starting the work	4	6	-	-
	PC6. perform routine maintenance activities on the equipment as specified in the manufacturer manual and maintenance checklist	4	8	-	-
	PC7. inspect and carry out the machine maintenance thoroughly for any defects per SOP	5	8	-	-
	PC8. clean and fix the die to the extrusion machine as per the WI/SOPs	4	7	-	-

RSC/N5610: Coordinate and communicate effectively at the workplace	PC9. assemble back the covers, guards, clamps, insulation etc. of the machine after repair and maintenance	5	8	-	-
	PC10. record all repairs carried out, parts replaced, time taken and other significant findings observed during the work process	3	5	-	-
	PC11. ensure that all maintenance activities are adequately addressed	2	3	-	-
	Total Marks	40	60	0	0
	<i>Communicate effectively with colleagues and seniors</i>	28	44	0	0
	PC1. interact with colleagues and senior in a polite and professional manner	2	4	0	0
	PC2. listen actively to the issues or requirements of colleagues and respond timely	2	4	0	0
	PC3. exhibit trust, support and respect to all colleagues and seniors	2	4	0	0
	PC4. pass on essential information to the colleagues timely	2	4	0	0
	PC5. maintain clarity, honesty and transparency while communicating with the seniors and colleagues	2	4	0	0
	PC6. coordinate with seniors on work-related and behavioral feedback	3	4	0	0
	PC7. comply with organization's policies and procedures for team work	3	4	0	0
	PC8. seek clarification on the information provided by seniors, if needed	3	4	0	0
	PC9. respect the personal and professional space of colleagues and superiors	3	4	0	0
	PC10. report status of work as per the schedule to seniors and inform about any deviations or anomalies	3	4	0	0
	PC11. provide information in the desired format and frequency	3	4	0	0
	<i>Coordinate with cross-functional teams</i>	12	16	0	0
	PC12. support colleagues of other departments for smooth work process, as required	3	4	0	0
	PC13. coordinate with maintenance /engineering team for preventive and corrective maintenance, break down and calibration errors	3	4	0	0
	PC14. provide inputs to the concerned stakeholders in periodic fence line review to detect non-compliance	3	4	0	0
	PC15. coordinate with health and safety team for incident or authorized personnel, accident and emergency, if any	3	4	0	0
	Total Marks	40	60	0	0
RSC/N5001: Carry out housekeeping	<i>Prepare for housekeeping activities</i>	22	31	0	0
	PC1. inspect the area/s to identify the different types of surfaces that require cleaning	2	4	0	0
	PC2. determine the material requirements for cleaning the areas inspected considering risk, time, efficiency and type of stain	4	4	0	0
	PC3. ensure that cleaning equipment is in proper working condition	2	4	0	0
	PC4. ensure that the suitable alternatives are selected for cleaning the areas, in case the appropriate equipment and materials are not available	3	4	0	0

RSC/N5007: Carry out health and safety	PC5. ensure that the correct sequence/steps are followed for cleaning the area to avoid re-soiling clean areas and surfaces	4	5	0	0
	PC6. ensure the usage of appropriate signage to inform about the cleaning activity being carried out	2	3	0	0
	PC7. ensure adequate ventilation for the work being carried out	2	3	0	0
	PC8. wear personal protective equipment suitable for the cleaning method and cleaning materials being used	3	4	0	0
	<i>Carry out housekeeping operations</i>	9	13	0	0
	PC9. ensure that the cleaning activity is carried out as per SOP	3	4	0	0
	PC10. manage accidental damage, as per the workplace procedure, caused while carrying out the work	2	3	0	0
	PC11. report to the appropriate person regarding difficulties in carrying out the work	2	3	0	0
	PC12. identify and report to the appropriate person if any additional cleaning required that is outside one's responsibility or skill	2	3	0	0
	<i>Perform post housekeeping activities</i>	9	16	0	0
	PC13. ensure that housekeeping equipment and supplies are stored and maintained as per company standards	2	3	0	0
	PC14. ensure that, on completion of the work, the area is left clean and dry as per the requirements	2	4	0	0
	PC15. ensure that the equipment, materials and personal protective equipment that were used, are returned to their respective places in appropriate manner	2	4	0	0
	PC16. ensure appropriate disposal of the waste garnered from the cleaning activity	1	3	0	0
	PC17. ensure that all necessary supplies or consumables are replenished as per the requirement	2	2	0	0
	Total Marks	40	60	0	0
Maintain safe and efficient workplace	<i>Maintain safe and efficient workplace</i>	9	32	0	0
	PC1. perform basic safety checks before operation of all machinery and equipment	1	4	0	0
	PC2. report hazards identified during safety checks to the appropriate supervisor	1	4	0	0
	PC3. use appropriate protective clothing/equipment/safety gear to carry out the related duties in accordance with the workplace policy	1	3	0	0
	PC4. assess the risk prior to performing the jobs which involve manual handling	1	4	0	0
	PC5. carry out work according to the recommended safe practices while ensuring minimum environmental damage	1	4	0	0
	PC6. return the equipment and materials to the designated storage after every use	1	4	0	0
	PC7. dispose off the waste safely as per the procedure in the designated area	1	3	0	0
	PC8. plan and implement actions to reduce the risk to bystanders	1	3	0	0
	PC9. monitor all the procedures and work instructions for controlling the risk	1	3	0	0

RSC/N5603: Follow ethical and sustainable practices at the workplace	<i>Follow appropriate emergency procedures</i>	12	22	0	0
	PC10. report accidents, incidents or problems, if any, without delay to an appropriate person	2	4	0	0
	PC11. perform immediate necessary action as required to reduce the damage	2	4	0	0
	PC12. follow procedures for dealing with accidents, fires and emergencies as per the company standards and workplace requirements	2	4	0	0
	PC13. operate emergency equipment in accordance with manufacturers' specifications and workplace requirements	2	3	0	0
	PC14. provide appropriate treatment to the patient's injuries in accordance with approved first aid techniques	1	2	0	0
	PC15. clean, inspect/ test, refurbish, replace and store the first aid equipment as appropriate	2	3	0	0
	PC16. report details of first aid administered in accordance with the workplace procedures	1	2	0	0
	<i>Comply with standard safety procedures</i>	5	12	0	0
	PC17. comply with standard safety procedures while handling heavy/hazardous material, chemicals, machine, equipment, or sharp tool to avoid accidents	1	3	0	0
	PC18. perform preventive actions to protect from leakages, water logging, pests, fire, pollution, etc.	2	3	0	0
	PC19. ensure zero accidents, damages, or breach of company safety procedure	1	3	0	0
	PC20. maintain the workplace organized, clean and hazard free	1	3	0	0
RSC/N5603: Follow ethical and sustainable practices at the workplace	<i>Participate in safety awareness campaigns</i>	4	4	0	0
	PC21. participate in the fire drills and other safety related workshops organized at the workplace	2	2	0	0
	PC22. create awareness about first aid, evacuation	2	2	0	0
	Total Marks	30	70	0	0
	Total Marks	40	60	0	0
	<i>Adopt resource conservation practices (Greening)</i>	40	60	0	0
RSC/N5603: Follow ethical and sustainable practices at the workplace	PC1. follow organizational policies for usage of alternate energy source, such as solar energy, for the site	3	3	0	0
	PC2. ensure proper usage of fuels (such as diesel) to minimise pollution and conserve energy	2	6	0	0
	PC3. use resources in a responsible manner	2	6	0	0
	PC4. ensure zero wastage of water and follow water conservation practices at the workplace	2	5	0	0
	PC5. carry out processes to prevent soil erosion during plantation and other related activities	2	6	0	0
	<i>Follow effective waste management practices</i>	13	17	0	0
RSC/N5603: Follow ethical and sustainable practices at the workplace	PC6. identify and segregate different types of waste such as recyclable, non-recyclable, and hazardous waste generated	3	4	0	0

	PC7. store waste into different types of bins/containers or appropriate areas based on their categorisation	3	4	0	0
	PC8. undertake disposal of non-recyclable waste appropriately as per the prescribed procedure	3	4	0	0
	PC9. organise storage of recyclable and reusable material at identified location	2	3	0	0
	PC10. ensure proper disposal of hazardous waste as per specified processes	2	2	0	0
	<i>Display behavioural Skills at workplace</i>	5	3	0	0
	PC11. ensure timely execution of the assigned tasks.	4	0	0	0
	PC12. exhibit proper etiquette and emotional behaviour at workplace and among team members	1	3	0	0
	<i>Adopt workplace practices and policies respecting gender and ability differences</i>	11	14	0	0
	PC13. follow appropriate non verbal communications taking gender and disability of the person into consideration	4	5	0	0
	PC14. communicate in a polite and appropriate manner irrespective of the ability and gender of the person	3	5	0	0
	PC15. ensure to provide work assistance/support to PwD team members and coordinate with them if needed or requested	4	4	0	0
	Total Marks	40	60	0	0
	<i>Introduction to Employability Skills</i>	1	1	-	-
	PC1. understand the significance of employability skills in meeting the job requirements	-	-	-	-
DGT/VSQ/N0101 - Employability Skills (30 hours)	<i>Constitutional values – Citizenship</i>	1	1	-	-
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
	<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
	PC3. explain 21st Century Skills such as Self- Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
	<i>Basic English Skills</i>	2	3	-	-
	PC4. speak with others using some basic English phrases or sentences	-	-	-	-
	<i>Communication Skills</i>	1	1	-	-
	PC5. follow good manners while communicating with others	-	-	-	-
	PC6. work with others in a team	-	-	-	-
	<i>Diversity & Inclusion</i>	1	1	-	-
	PC7. communicate and behave appropriately with all genders and PwD	-	-	-	-
	PC8. report any issues related to sexual harassment	-	-	-	-
	<i>Financial and Legal Literacy</i>				

PC9. use various financial products and services safely and securely	3	4	-	-
PC10. calculate income, expenses, savings etc.				
PC11. approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	4	6	-	-
PC12. operate digital devices and use its features and applications securely and safely				
PC13. use internet and social media platforms securely and safely				
<i>Entrepreneurship</i>	3	5	-	-
PC14. identify and assess opportunities for potential business				
PC15. identify sources for arranging money and associated financial and legal challenges				
<i>Customer Service</i>	2	2	-	-
PC16. identify different types of customers				
PC17. identify customer needs and address them appropriately				
PC18. follow appropriate hygiene and grooming standards				
<i>Getting ready for apprenticeship & Jobs</i>	1	3	-	-
PC19. create a basic biodata				
PC20. search for suitable jobs and apply				
PC21. identify and register apprenticeship opportunities as per requirement				
Total Marks	20	30	0	0
Grand Total	290	460	0	0

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

On the Job:

1. Each module (which covers the job profile of Operator – Plastic Extrusion Machine will be assessed separately.
2. The candidate must score 50% 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
 - Answer Sheets of Question Banks
 - Assessing the Logbook entries of Trainees at Employer location

- Employer Performance Feedback.

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

- Perform pre startup activities for extrusion process
- Perform plastic extrusion process
- Perform maintenance activities

Annexure: Acronym and Glossary

Acronym

Acronym	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
SOP	Standard operating procedure
UV	Ultraviolet
PPE	Personal Protective Equipment
PwD	Person with Disability

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