QUALIFICATION FILE

Designer - Plastic Product including toys

☒ 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: 4

Submitted By:

Rubber, Chemical & Petrochemical Skill Development Council (RCPSDC)

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

New Delhi – 110017 (India)

Table of Contents

Section 1: Basic Details

1.	**Qualification Name**	**Designer - Plastic Product including toys**	
2.	**Sector/s**	**Chemical & Petrochemical**	
3.	**Type of Qualification: ☐ New ☒ Revised ☐ Has Electives/Options ☐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/RUB/RCPSDC/06954	**6. NCrF/NSQF Level: 4**
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 at work is responsible for preparing the drawing for various plastic products using applicable software.	
9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	**a. Entry Qualification & Relevant Experience:**	

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1	12th Class Pass (Science Stream)	6 months of relevant experience
2	Completed 1st year of 3-year Diploma (after 10th) and pursuing regular diploma	
3	10th Class Pass with 1-year NTC/NAC	
4	8th Grade Pass plus 2-year NTC plus 1-year NAC	
5	8th Grade Pass plus 1-year NTC plus 1-year NAC plus NITC	
6	Certificate NSQF Level 3 (Jr. Designer Plastic Product)	2 years of relevant experience

b. Age: 18 years

<table>
<tr><td>10.</td><td>Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))</td><td>17</td><td colspan="2">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="3">NA</td></tr>
<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="3">☒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>160:00</td><td>290:00</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>
</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="3">NCO-2015/2144.0803</td></tr>
<tr><td>15.</td><td>Progression path after attaining the qualification (Please show Professional and Academic progression)</td><td colspan="3">CAD/ CAM Designer – Plastic Product</td></tr>
<tr><td>16.</td><td>Other Indian languages in which the Qualification & Model Curriculum are being submitted</td><td colspan="3">Hindi</td></tr>
<tr><td>17.</td><td>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</td><td colspan="3">☐ 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="3">☐ Yes ☒ No</td></tr>
<tr><td>19.</td><td>How Participation of Women will be Encouraged</td><td colspan="3">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="3">☒ Yes ☐ No
1. RSC/N5603 – Follow Ethical and Sustainable Practices at Workplace</td></tr>
<tr><td>21.</td><td>Is Qualification Suitable to be Offered in Schools/Colleges</td><td colspan="3">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="3">Name: Saif Mohammad
Email: ceo@rsdcindia.in Contact No.: 011 41004899
Website: http://rsdcindia.in/</td></tr>
<tr><td>23.</td><td>Final Approval Date by NSQC: 30/06/2022</td><td>24. Validity Duration: 3 Years</td><td colspan="2">25. Next Review Date: 30/06/2025</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.	Prepare technical drawing for plastic product	RSC/N8004 & V1.0	Core	4	5	60	90	00	00	150	40	60	0	0	100	20
2.	Design Plastic Toys	RSC/N8010 & V1.0	Core	4	5	50	100	00	00	150	40	60	0	0	100	20
3.	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	15
4.	Carry out housekeeping	RSC/N5001 & V3.0	Non-Core	4	1	10	20	00	00	30	40	60	0	0	100	15
5.	Carry out health and safety	RSC/N5007 & V3.0	Non - Core	4	1	10	20	00	00	30	30	70	0	0	100	10
6.	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
7.	Employability Skills (30 Hours)	DGT/VSQ/N0101 & V1.0	Non - Core	2	1	10	20	00	00	30	20	30	0	0	50	10
8.	OJT		Core	4	2	00	00	60	00	60	0	0	0	0	0	0
Duration (in Hours) / Total Marks					17	**160**	**290**	**60**	**00**	**510**	**250**	**400**	**0**	**0**	**550**	**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-year 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-year industrial experience.
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**	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-year 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 7-year industrial experience.
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):** 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):** Yes
4.	**Number of Industry validation provided:** 27
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
Professional Theoretical Knowledge/Process	**Work in familiar, predictable, routine, situation of clear choice.** • Prepare technical drawing for plastic product • Coordinate and communicate effectively at the workplace • Carry out housekeeping • Carry out health and safety • Follow ethical and sustainable practices at the workplace • Design plastic toys	• A Designer - Plastic Product including toys should able to prepare technical drawing for plastic products as per the organisational standards. The person works in a familiar, predictable, and routine environment. • Hence Level 4	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	**Factual knowledge of field of knowledge or study.** • List various types of thermoplastics and the additives to be used in designing of plastic product • Discuss the fundamentals of engineering drawing along with the techniques to analyze mould material specifications, sketches, engineering drawings, idea, etc. and design techniques, tools, and principals involved in preparing design of plastic product • Explain different stages involved in the product design process and manufacturing and processing methods such as Injection moulding, compression moulding, etc. • Elaborate the methods to obtain specification/outline dimensions and other details for selected product and draw rough sketch and perform mathematical computations to develop design • Explain the methods of using CAD and CAM software for preparing the plastic product and producing three-dimensional models, using these software • Explain the standard procedure to coordinate with supervisor and team members • Describe standard escalation matrix and significance of following dos and don'ts of the work area	• A Designer - Plastic Product including toys should have factual knowledge of the sector like, fundamentals of engineering drawing, different stages of product design process, draw rough sketch and perform mathematical computations to develop design, use of CAD and CAM software etc. • Hence level 4	4

	• Discuss various formats of documents to be maintained while designing a product • Discuss standard policies on behavioural etiquette, professionalism and gender sensitive service practices at workplace and hierarchy and reporting structure • List key helpline number Explain effective ways of team coordination • Discuss various factors to determine the type of cleaning, level of hygiene and methods and material used for cleaning • 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 of escalation for soils or stains that could not be removed and reporting for any unidentified soiling • Describe the method to check the treated surface and equipment on completion of the cleaning process and the importance of completing the activities as per the schedule • 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 • Discuss harmful effect of using fuel such as diesel etc. along with alternate energy sources and alternate fuels • Explain water harvesting techniques and soil erosion • Describe the different types of waste and the different colours of dustbin for proper waste management • State the importance of following organizational standards and guidelines related to PwD • Fundamentals of CAD software • Toy design briefs and parameters like child-friendly material, design, safety, etc. • Purpose for which the 3-D toy model is to be developed • Toy modelling techniques • Appropriate coordinating system for the job • Orientation of the model with respect to the coordinate system • Procedures for creating and manipulating entities in 3-D space • Rendering types and preferences, render lighting techniques, views and scenes • Procedures for saving drawing files • Various formats in which drawing files can be saved • Physical properties of shapes created in 3-D space that can be extracted from the drawing file • Procedure to create simulations and perform stress analysis using CAD • Hazards and control measures associated with using CAD system, including housekeeping		

	• National and international standards for child toy manufacturing • Methods for design calculations to meet end use application (shrinkage calculation) • Properties and application of various plastic materials and plastic processing • Manufacturing and processing of plastic product toys • Process of reverse engineering and prototyping • Feasibility of tool design from constraints view point and manufacturability of the products • Solid model execution techniques to set specific criteria		
Professional skill	**Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts.** • Note down instructions received from the seniors • Apply problem-solving approach prior to resolve difficulties • 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	• A Designer - Plastic Product including toys has to prepare for manufacturing of the product and perform production and post- production activities by applying professional skills at workplace as per the organizational service standards. This person recalls and demonstrate practical skill and perform routine and repetitive work in a narrow range of application by using appropriate rule and tools using a quality concept. • Hence Level 4	4
Core skill	**Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social political and natural environment.** • Read and interpret job related documents • Communicate effectively with supervisor and team members • Communicate with all stakeholders in a polite and courteous manner using effective communication skills • Write in English or any regional language • Ensure punctuality, proper utilization of time and management workload efficiently	• A Designer - Plastic Product including toys should apply core skills such as communicating in written or oral language, with required clarity, skill to basic arithmetic and algebraic principles, basic understanding of social, political and natural environment. • Hence Level 4	4

	• Interact with all stakeholders in a polite and courteous manner • Provide support in dealing with stress and anxiety help colleagues to work efficiently • Create awareness about maintaining hygiene at workplace		
Responsibility	**Responsibility for own work and learning.** • Prepare for product designing • Design plastic product • Release tool drawings • Record and report • 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 • Prepare designs for plastic toys • Prepare the 3-D model for plastic toys • Complete the CAD operations for toy designing • Follow safety guidelines for toys	• A Designer - Plastic Product including toys is responsible for preparing for product designing, designing plastic product, release tool drawing, and recording and reporting as per the organisational standards. This person take responsibility for own work and learning. • Hence Level 4	4

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	Sample design for briefing considering design requirements		30
2	rough sketches		30
3	final product specifications		30
4	production plans and drawings for the required plastics product		30
5	Required CAD and CAM software		10
6	Sample plastic product design		30
7	Laptop		10

Classroom Aids

The aids required to conduct sessions in the classroom are:

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

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	Sidhi Thermoformers Village Bhanokheri	Ashish Sareen	Manager Operations	Ambal	9416195379	ashusareen1@yahoo.com	-
2	Medicoplast	Paresh	Properitor	Vadodara	9638371969	medicoplastindia@gmail.com	-
3	Ahilya Enterprises	Abhishek Dubey	Proprietor	-	9148364916	avdubey.ahilya@gmail.com	-
4	Kira Enterprises	Abhinav Jalan	Accounts And Sales	-	8853841030	kiranenterprises91@yahoo.com	-
5	R J TACKLES PVT LTD.	Harishankar Das	Factory Incharbe	Howrah	7003754291	factoryrjt@gmail.com	-
6	PRINCE PET	Raja Gosh	Proprietor	Kolkata	9681569912	princepet.kp@gmail.com	-
7	Packaging and Recycling Consultant	Rajesh Kumar Gera	-	-	9967033107	rajeshkgera@gmail.com	-
8	Grihzon Plastic Bottle Manufacturing Pvt Ltd	Sumit Kumar	Director	Jharkhand	6370578724	grihzone.info@gmail.com	-
9	Mahabir Plastic Industries	Pooja Rehlan	Head- HR	Haryana	8287955040	marketing@mahabirplastic.com	-
10	Manjushree Solutions	Smitha	HR	Assam	7811020465	smitha.b@manjushree.in	-
11	Prandeep Plasto Industries Pvt Ltd	Prangopal Saha	Proprietor	Tripura	9436451890	prangopal.saha@gmail.com	-
12	RFL Plastics	Arindam Modak	Project Manager	Tripura	6009905225	info@rflapp1.com	-
13	Royal fasteners	Kamlesh Jain	Director	Guwahati	6290734254	kamleshjain2006@gmail.com	-
14	Tarashankar Platsoc Industries	Sajib Saha	Project Head	Tripura	0381-2381364	infor@tarashankar.com	-
15	Vishnu Enterprise Pvt Ltd	Ramesh Kumar	Manager	Bihar	7484908397	vishnuenterprize520@gmail.com	-

16	GAIL	Manish Khandelwal	GM	Uttar Pradesh	9958745666	m.khandelwal@gail.com	-
17	Globus Enterprises	Asif Khan	HR Manager	Haryana	8950100576	asif.khan2396@gmail.com	-
18	EPL	Yaram VV Sudhakar	Manager-Technical Recruitment	Maharashtra	9673333546	sudhakar.yaram@eplglobal.com	-
19	Polyplex Coorporation Limited	Sunil Kumar Singh	Lead Manager	Uttarakhand	9568006870	ssingh@polyplex.com	-
20	Cosmo Auto Tech pvt ltd	Prahalad	Senior Manager	Haryana	9911663852	accounts@cosmoautotech.com	-
21	Suman Auto Parts Limited	Anand Sharma	Manager- HR	Haryana	9540777930	anand@sumanauto.net	-
22	Reliance Industries ltd.	Dr. Ajit Mathur	Retired Vice President (R and D)		9998954004	drajitmathur@gmail.com	-
23	Lisa Plastic	Sunil Sahoo	Manager	Odisha	9776645779	lisa_plastics@yahoo.co.in	-
24	The Sirpur Paper Mills	M. Naga Raju	Sr. Manager	Telangana	9912345001	naga.raju@spm.jkmail.com	-
25	Sekisui Dljm Moulding Pvt Ltd	R. Kumaresan	Assistant Manager	Tamil Nadu	7823930455	hrd5.ch@sekisuidljm.com	-
26	Innovsource Services Private Limited	Ashwin Kute	Vp and Head Sales	Maharashtra	9820854493	ashwinkute@innov.in	-
27	Varroc Polymers	Mahendra Pujari	Manager, HR	Maharashtra	9673001465	mahendra.pujari@varroc.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:

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	50:50
2	☒Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	• Self-Learning Videos • Broadcasts • Mobile Learning • Curated Digital content	50:50
3	☒Showing Practical Demonstrations to the learners	• Video Content • E-Resource library • AR/ VR/ XR	50:50
4	☒Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	• Training tools (tools list attached) • Video Play • Presentations	50:50
5	☒Tutorials/ Assignments/ Drill/ Practice	• Online Question Bank • Mobile Quick test app • MCQ based tests	50:50
6	☒Proctored Monitoring/ Assessment/ Evaluation/ Examinations	• Assessment engine for Essays • Up-loadable file examinations • Mock test sessions	50:50
7	☒On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	• Online tests • Offline assessments	50:50

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
RSC/N8004 - Prepare technical drawing for plastic product	*Prepare for product designing*	**5**	**10**	-	-
	PC1. obtain and interpret the work order to understand dimensions and properties of the required work output	1	4	-	-
	PC2. determine the manufacturing methods and end-use specifications and properties for the product to be designed like required strength, exposure to chemicals or harsh environments, appearance requirements, dimensional tolerances, processing method, assembly method, specific service temperature ranges, recyclability considerations, etc.	2	3	-	-
	PC3. finalize the required dimensions with tolerance of shrinkage and other design requirements with the authorized person	2	3	-	-
	Design plastic product	**15**	**20**	-	-
	PC4. prepare a design brief considering design requirements	1	1	-	-
	PC5. test and seek feedback on design ideas from the authorized personnel	1	2	-	-
	PC6. draw rough sketches and perform mathematical computations to develop product design	1	1	-	-
	PC7. generate final product specifications and production plans	1	1	-	-
	PC8. evaluate feasibility of design ideas, based on factors such as appearance, safety, function, serviceability, budget, production costs/methods, and market characteristics	1	1	-	-
	PC9. prepare drawings for the required plastics product using drafting instruments or computer- aided engineering	1	2	-	-
	PC10. direct and coordinate the fabrication of models or samples and the drafting of working drawings and specification sheets from sketches	1	1	-	-
	PC11. lay out and draw schematic, orthographic, or angle views to depict functional relationships of components and assemblies	1	2	-	-
	PC12. produce three-dimensional models, using computer-aided design (CAD) software	1	1	-	-
	PC13. modify and refine designs, using working models, to conform with customer specifications, production limitations, or changes in design trends	1	1	-	-
	PC14. preview the proposed product through CAD modeling and 3D printing	1	1	-	-

	PC15. verify the design and functionality of the product through engineering and computer simulation	1	2	-	-
	PC16. present designs and reports to customers or design committees for approval and discuss need for modification	1	1	-	-
	PC17. submit finalized plastic product tool mould drawing to supervisor for approval	1	2	-	-
	PC18. make changes in the drawing as per the feedback received from supervisor, if any and resubmit drawing again for final approval	1	1	-	-
	Release tool drawings	**15**	**20**	-	-
	PC19. release approved drawings of the plastic product to production department/user along with model of the core & cavity	3	4	-	-
	PC20. modify and revise designs to correct operating deficiencies or to reduce production problems, if any	3	4	-	-
	PC21. monitor product development as per machining process for any revisions, clarity required, etc.	3	4	-	-
	PC22. modify the drawing as per supervisor's feedback, if any	3	4	-	-
	PC23. release new sub drawing after getting written confirmation from the customer as per SOP	3	4	-	-
	Record and report	**5**	**10**	-	-
	PC24. maintain records of the plastic product drawing development and modification of the drawing	3	5	-	-
	PC25. report problem/concerns to the supervisor	2	5	-	-
	Total Marks	**40**	**60**	0	0
RSC/N8010 - Design plastic toys	*Prepare design for plastic toys*	**15**	**20**	-	-
	PC1. obtain and interpret job specification and blueprint	1	1	-	-
	PC2. determine the required design, detailed drawings, modelling and layouts for job specifications	2	1	-	-
	PC3. review toy design briefs and parameters like materials, shapes, colours and texture and other child safety measures, etc. to determine the drawing and documentation requirements	1	2	-	-
	PC4. ensure the materials used are eco-friendly, safe and secure for manufacturing toys for kids	1	1	-	-
	PC5. identify and prepare the equipment and CAD software required to complete the work	1	1	-	-
	PC6. apply workplace procedures to retrieve and manipulate required information and navigate CAD technology	1	1	-	-

	PC7. examine sketches, drawings and other information and confirm calculations and measurements	2	1	-	-
	PC8. select and prepare computing equipment and suitable software for plastic toy designs	1	2	-	-
	PC9. prepare drawings for toys as per requirement, including solid modelling	1	2	-	-
	PC10. ensure the drawings comply with relevant tests and standards for toy products	1	2	-	-
	PC11. review and validate CAD files generated out of reverse engineering	1	2	-	-
	PC12. calculate and validate the strength analysis of plastic product (toys)	1	2	-	-
	PC13. record application and testing requirements of plastic product toys in consideration with the end use application	1	2	-	-
	Prepare 3-D model for plastic toys	**15**	**26**	**-**	**-**
	PC14. set up a 3-D environment on the screen to allow multiple viewing	1	2	-	-
	PC15. manipulate drawing planes and insert 3-D geometric shapes to create the 3-D view	1	2	-	-
	PC16. draw on any plane of the 3-D view	2	2	-	-
	PC17. use editing functions to modify 3-D geometric shapes in creating 3-D view	1	2	-	-
	PC18. produce displays in isometric, perspective and orthographic projections	1	2	-	-
	PC19. establish the coordinating system and orientation according to job specifications	1	2	-	-
	PC20. extract physical properties for job requirements, including volume, mass and center of gravity	1	2	-	-
	PC21. edit solid models of toy components as per requirement	2	2	-	-
	PC22. use perspective principles to enhance the spatial illusion of toys in space	1	2	-	-
	PC23. produce 3-D drawings incorporating section views with all necessary annotations	1	2	-	-
	PC24. simulate the toy design using CAD for appropriate requirements and smooth movements	1	2	-	-
	PC25. perform stress analysis using CAD to determine the parts in the assembly that are subjected to maximum stress	1	2	-	-
	PC26. alter the design to reduce any breakages in the prototype	1	2	-	-
	Complete CAD operations for plastic toy designing	**6**	**10**	**-**	**-**
	PC27. ensure the toy model accurately reflects specifications, contains all relevant information, and is presented according to work requirements	1	3	-	-
	PC28. evaluate work and identify areas for improvement	2	3	-	-

	PC29. save and file drawings to allow easy access according to organizational documentation system	1	2	-	-
	PC30. submit the drawing for approval and modify, as required	2	2	-	-
	Follow safety guidelines for toys	**4**	**4**	**-**	**-**
	PC31. ensure that all materials used for packaging and decoration are safe as per the prescribed guidelines	1	1	-	-
	PC32. make sure that individual substances/materials do not pose an inherent hazard to a child during play	1	1	-	-
	PC33. ensure total content analysis to ensure that no substances are present in excess of national safety limits or internally (company) adopted limits	1	1	-	-
	PC34. make certain that all electric and non- electric toys bear the ISI mark, as required by BIS	1	1	-	-
	Total Marks	**40**	**60**	**0**	**0**
RSC/N5610: Coordinate and communicate effectively at the workplace	*Communicate effectively with colleagues and seniors*	**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
	Coordinate with cross-functional teams	**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**
	Prepare for housekeeping activities	**22**	**31**	0	0

RSC/N5001: Carry out housekeeping	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
	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
	Carry out housekeeping operations	**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
	Perform post housekeeping activities	**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**
RSC/N5007: Carry out health and safety	*Maintain safe and efficient workplace*	**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
	Follow appropriate emergency procedures	**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
	Comply with standard safety procedures	**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
	Participate in safety awareness campaigns	**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**
RSC/N5603: Follow ethical and sustainable practices at the workplace	*Adopt resource conservation practices (Greening)*	**40**	**60**	0	0
	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
	Follow effective waste management practices	**13**	**17**	0	0
	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
	Display behavioural Skills at workplace	**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
	Adopt workplace practices and policies respecting gender and ability differences	**11**	**14**	**0**	**0**
	PC13. follow appropriate nonverbal 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**
DGT/VSQ/N0101 - Employability Skills (30 hours)	*Introduction to Employability Skills*	**1**	**1**	**0**	**0**
	PC1. understand the significance of employability skills in meeting the job requirements	0	0	**0**	**0**
	Constitutional values – Citizenship	**1**	**1**	**0**	**0**
	PC2. identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	0	0	**0**	**0**
	Becoming a Professional in the 21st Century	**1**	**3**	**0**	**0**
	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.	0	0	0	0
	Basic English Skills	**2**	**3**	**0**	**0**
	PC4. speak with others using some basic English phrases or sentences	0	0	0	0
	Communication Skills	**1**	**1**	**0**	**0**
	PC5. follow good manners while communicating with others	0	0	0	0
	PC6. work with others in a team	0	0	0	0
	Diversity & Inclusion	**1**	**1**	**0**	0

	PC7. communicate and behave appropriately with all genders and PwD	0	0	0	0
	PC8. report any issues related to sexual harassment	0	0	0	0
	Financial and Legal Literacy	**3**	**4**	**0**	**0**
	PC9. use various financial products and services safely and securely	0	0	0	0
	PC10. calculate income, expenses, savings etc.	0	0	0	0
	PC11. approach the concerned authorities for any exploitation as per legal rights and laws	0	0	0	0
	Essential Digital Skills	**4**	**6**	**0**	**0**
	PC12. operate digital devices and use its features and applications securely and safely	0	0	0	0
	PC13. use internet and social media platforms securely and safely	0	0	0	0
	Entrepreneurship	**3**	**5**	**0**	**0**
	PC14. identify and assess opportunities for potential business	0	0	0	0
	PC15. identify sources for arranging money and associated financial and legal challenges	0	0	0	0
	Customer Service	**2**	**2**	0	0
	PC16. identify different types of customers	0	0	0	0
	PC17. identify customer needs and address them appropriately	0	0	0	0
	PC18. follow appropriate hygiene and grooming standards	0	0	0	0
	Getting ready for apprenticeship & Jobs	**1**	**3**	0	0
	PC19. create a basic biodata	0	0	0	0
	PC20. search for suitable jobs and apply	0	0	0	0
	PC21. identify and register apprenticeship opportunities as per requirement	0	0	0	0
	Total Marks	**20**	**30**	0	0
Grand Total		**250**	**400**	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 Designer – Plastic Product including toys 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:
    - Prepare technical drawing for plastic product
    - Design plastic toys

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
LOTO	Lock Out Tag Out
PPE	Personal Protective Equipment
PwD	Persons with Disabilities
POSH	Prevention Of Sexual Harassment Policy At Workplace
4Ps	Product, Price, Place and Promotion

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