



## QUALIFICATION FILE

### MACHINE OPERATOR - PLASTICS EXTRUSION

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

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

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

NCrF/NSQF Level:3.5

Submitted By:

**Central Institute of Petrochemicals Engineering & Technology (CIPET)**  
Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers, Govt. of India  
CIPET Head office, T.V.K Industrial Estate, Guindy, Chennai – 600 032.

## Table of Contents

|                                                            |    |
|------------------------------------------------------------|----|
| Section 1: Basic Details .....                             | 3  |
| Section 2: Module Summary .....                            | 5  |
| NOS/s of Qualifications.....                               | 5  |
| Mandatory NOS/s: .....                                     | 5  |
| Elective NOS/s: .....                                      | 6  |
| Optional NOS/s: .....                                      | 6  |
| Assessment - Minimum Qualifying Percentage.....            | 6  |
| Section 3: Training Related.....                           | 7  |
| Section 4: Assessment Related.....                         | 7  |
| Section 5: Evidence of the need for the Qualification..... | 7  |
| Section 6: Annexure & Supporting Documents Check List..... | 8  |
| Annexure: Evidence of Level .....                          | 11 |
| Annexure: Tools and Equipment(Lab Set-Up) .....            | 15 |
| Annexure: Industry Validations Summary .....               | 16 |
| Annexure: Training & Employment Details .....              | 17 |
| Annexure: Blended Learning .....                           | 18 |
| Annexure: Detailed Assessment Criteria .....               | 19 |
| <b>Annexure: Assessment Strategy</b> .....                 | 24 |
| Annexure: Acronym and Glossary .....                       | 26 |

## Section 1: Basic Details

| 1.     | Qualification Name                                                                                                                                                             | Machine Operator - Plastics Extrusion (MO-PE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------|-----------------------------------------------------------|----|------------------------|------------------------|----|--------------------------------------|-------------------------------|----|-----------------------|-------------------------------|----|-------------------------------------------------|-------------------------------|
| 2.     | Sector/s                                                                                                                                                                       | Chemicals & Petrochemicals (CPC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 3.     | Type of Qualification: <input type="checkbox"/> New <input checked="" type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options<br><input type="checkbox"/> OEM | NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i><br>2021/CP/CIPET/04626                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Qualification Name of existing/previous version:<br>Machine Operator- Plastics Extrusion (MO-PE) |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 4.     | a. OEM Name<br>b. Qualification Name<br><i>(Wherever applicable)</i>                                                                                                           | Not Applicable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 5.     | National Qualification Register (NQR) Code&Version<br><i>(Will be issued after NSQC approval)</i>                                                                              | QG-3.5-CP-04119-2025-V2-CIPET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 6. NCrf/NSQF Level: Level 3.5                                                                    |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 7.     | Award (Certificate/Diploma/Advance Diploma/Any Other) <i>(Wherever applicable specify multiple entry/exits also &amp; provide details in annexure)</i>                         | Certificate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 8.     | Brief Description of the Qualification                                                                                                                                         | The Machine operator helps in handling plastics granules (raw material), operates the Plastic Extrusion Moulding machines, set process parameter, carryout basic quality check of finished products & stores in the desired place.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 9.     | Eligibility Criteria for Entry for Student/Trainee/Learner/Employee                                                                                                            | a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization – if applicable)</th> <th>Required Experience (with Specialization – if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Grade 11<sup>th</sup></td> <td>No Experience required</td> </tr> <tr> <td>2.</td> <td>Grade 10<sup>th</sup> or equivalent</td> <td>1.5 years relevant experience</td> </tr> <tr> <td>3.</td> <td>8<sup>th</sup> grade</td> <td>4.5 years relevant experience</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 3</td> <td>1.5 years relevant experience</td> </tr> </tbody> </table> |                                                                                                  | S. No. | Academic/Skill Qualification (with Specialization – if applicable) | Required Experience (with Specialization – if applicable) | 1. | Grade 11 <sup>th</sup> | No Experience required | 2. | Grade 10 <sup>th</sup> or equivalent | 1.5 years relevant experience | 3. | 8 <sup>th</sup> grade | 4.5 years relevant experience | 4. | Previous relevant Qualification of NSQF Level 3 | 1.5 years relevant experience |
| S. No. | Academic/Skill Qualification (with Specialization – if applicable)                                                                                                             | Required Experience (with Specialization – if applicable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 1.     | Grade 11 <sup>th</sup>                                                                                                                                                         | No Experience required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 2.     | Grade 10 <sup>th</sup> or equivalent                                                                                                                                           | 1.5 years relevant experience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 3.     | 8 <sup>th</sup> grade                                                                                                                                                          | 4.5 years relevant experience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 4.     | Previous relevant Qualification of NSQF Level 3                                                                                                                                | 1.5 years relevant experience                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 10.    | Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrf))</i>                                                                 | 20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 11. Common Cost Norm Category (I/II/III) <i>(wherever applicable)</i> :I                         |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |
| 12.    | Any Licensing requirements for Undertaking Training on This Qualification <i>(wherever applicable)</i>                                                                         | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                  |        |                                                                    |                                                           |    |                        |                        |    |                                      |                               |    |                       |                               |    |                                                 |                               |

|     |                                                                                                                                                                              |                                                                                                                                                          |                       |                          |                                  |                                |                      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------|----------------------------------|--------------------------------|----------------------|
| 13. | <b>Training Duration by Modes of Training Delivery</b> ( <i>Specify Total Duration as per selected training delivery modes and as per requirement of the qualification</i> ) | <input checked="" type="checkbox"/> Offline <input type="checkbox"/> Online <input type="checkbox"/> Blended                                             |                       |                          |                                  |                                |                      |
|     |                                                                                                                                                                              | <b>Training Delivery Modes</b>                                                                                                                           | <b>Theory (Hours)</b> | <b>Practical (Hours)</b> | <b>OJT Mandatory (Hours)</b>     | <b>OJT Recommended (Hours)</b> | <b>Total (Hours)</b> |
|     |                                                                                                                                                                              | Classroom (offline)                                                                                                                                      | 210                   | 360                      | 30                               | -                              | 600                  |
|     |                                                                                                                                                                              | Online                                                                                                                                                   | -                     | -                        | -                                | -                              | -                    |
|     |                                                                                                                                                                              | (Refer Blended Learning Annexure for details)                                                                                                            |                       |                          |                                  |                                |                      |
| 14. | <b>Aligned to NCO/ISCO Code/s</b> (if no code is available mention the same)                                                                                                 | NCO-2015/8142.0400                                                                                                                                       |                       |                          |                                  |                                |                      |
| 15. | <b>Progression path after attaining the qualification</b> ( <i>Please show Professional and Academic progression</i> )                                                       | Shift In-charge/ Supervisor in Plastics Extrusion Industry                                                                                               |                       |                          |                                  |                                |                      |
| 16. | <b>Other Indian languages in which the Qualification &amp; Model Curriculum are being submitted</b>                                                                          | Hindi                                                                                                                                                    |                       |                          |                                  |                                |                      |
| 17. | <b>Is similar Qualification(s) available on NQR-if yes, justification for this qualification</b>                                                                             | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:                                                      |                       |                          |                                  |                                |                      |
| 18. | <b>Is the Job Role Amenable to Persons with Disability</b>                                                                                                                   | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If "Yes", specify applicable type of Disability:                                  |                       |                          |                                  |                                |                      |
| 19. | <b>How Participation of Women will be Encouraged</b>                                                                                                                         | During selection of candidates for the training programme, Female candidates are given preference                                                        |                       |                          |                                  |                                |                      |
| 20. | <b>Are Greening/ Environment Sustainability Aspects Covered</b> ( <i>Specify the NOS/Module which covers it</i> )                                                            | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                      |                       |                          |                                  |                                |                      |
| 21. | <b>Is Qualification Suitable to be Offered in Schools/Colleges</b>                                                                                                           | Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                       |                          |                                  |                                |                      |
| 22. | <b>Name and Contact Details of Submitting / Awarding Body SPOC</b> ( <i>In case of CS or MS, provide details of both Lead AB &amp; Supporting ABs</i> )                      | Name: Arunav Banerjee<br>Email: cipethovtc@cipet.gov.in Contact No.: 9402183512<br>Website: www.cipet.gov.in                                             |                       |                          |                                  |                                |                      |
| 23. | <b>Final Approval Date by NSQC: 26.05.2025</b>                                                                                                                               | 24. Validity Duration: 3 Years                                                                                                                           |                       |                          | 25. Next Review Date: 25.05.2028 |                                |                      |

## Section 2: Module Summary

### NOS/s of Qualifications

(In exceptional cases these could be described as components)

### Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer 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.                                | Understand the Basics of Plastics Raw Material & concept of Extrusion Techniques        | CPC/N0319 & V2.0                          | Core           | 3.5              | 2                   | 20                        | 40  | -        | -        | 60    | 20               | 40  | -     | -    | 60    | -                             |
| 2.                                | Maintain basic health and safety practices at the workplace, 5S.                        | CPC/N0411 & V2.0                          | Non-Core       | 3.5              | 1                   | 10                        | 20  | -        | -        | 30    | 10               | 30  | -     | -    | 40    | -                             |
| 3.                                | Understand the basics & importance of Plastics Compounding /Mixing                      | CPC/N0321 & V2.0                          | Core           | 3.5              | 3                   | 30                        | 60  | -        | -        | 90    | 30               | 50  | -     | -    | 80    | -                             |
| 4.                                | Perform HDPE /PVC Pipe Extruder Machine Operation                                       | CPC/N0322 & V2.0                          | Core           | 3.5              | 4                   | 40                        | 80  | -        | -        | 120   | 40               | 70  | -     | -    | 110   | -                             |
| 5.                                | Perform the Plastic Film Extruder Machine Operation                                     | CPC/N0323 & V2.0                          | Core           | 3.5              | 4                   | 40                        | 80  | -        | -        | 120   | 40               | 70  | -     | -    | 110   | -                             |
| 6.                                | To Carryout House Keeping.                                                              | CPC/N0324 & V2.0                          | Core           | 3.5              | 1                   | 10                        | 20  | -        | -        | 30    | 10               | 20  | -     | -    | 30    | -                             |
| 7.                                | Reporting & Documentation                                                               | CPC/N0315 & V2.0                          | Core           | 3.5              | 1                   | 10                        | 20  | -        | -        | 30    | 10               | 30  | -     | -    | 40    | -                             |
| 8.                                | To carryout basic quality check of finished products with reference to approved product | CPC/N0316 & V2.0                          | Core           | 3.5              | 2                   | 20                        | 40  | -        | -        | 60    | 30               | 80  | -     | -    | 110   | -                             |
| 9.                                | Employability Skills                                                                    | DGT/VSQ/N0101 & V1.0                      | Non-Core       | 3.5              | 1                   | 30                        | -   | -        | -        | 30    | 10               | 10  | -     | -    | 20    | -                             |
| 10.                               | On the Job Training (OJT)                                                               | N/A                                       | -              | 3.5              | 1                   | -                         | -   | 30       | -        | 30    | -                | -   | -     | -    | -     | -                             |
| Duration (in Hours) / Total Marks |                                                                                         |                                           | -              | -                | 20                  | 210                       | 360 | 30       | -        | 600   | 200              | 400 | -     | -    | 600   | -                             |

**Elective NOS/s:**

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

**Optional NOS/s:**

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

**Assessment - Minimum Qualifying Percentage**

Please specify any one of the following:

**Minimum Pass Percentage –Aggregate at qualification level:**

50% for theory and 70% for practical (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

**Minimum Pass Percentage –NOS/Module-wise:**

(Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)

### Section 3: Training Related

|    |                                                                                                                         |                                                                                                                           |
|----|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| 1. | <b>Trainer's Qualification and experience in the relevant sector (in years)</b> <i>(as per NCVET guidelines)</i>        | Diploma with minimum 2 years experience in field of Plastics / Polymer Engineering / Technology                           |
| 2. | <b>Master Trainer's Qualification and experience in the relevant sector (in years)</b> <i>(as per NCVET guidelines)</i> | B.E. / B.Tech. / M.Sc. with 2 years experience in the field of Plastics / Polymer Engineering / Science                   |
| 3. | <b>Tools and Equipment Required for Training</b>                                                                        | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If "Yes", details to be provided in Annexure)</i> |
| 4. | <b>In Case of Revised Qualification, Details of Any Upskilling Required for Trainer</b>                                 | Nil                                                                                                                       |

### Section 4: Assessment Related

|    |                                                                                                                              |                                                                                                                                                                                                                                |
|----|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | <b>Assessor's Qualification and experience in relevant sector (in years)</b> <i>(as per NCVET guidelines)</i>                | Diploma with minimum 5 years experience in the field of Plastics / Polymer Engineering / Technology<br>Or<br>B.E. / B.Tech. with minimum 2 years experience in the field of Plastics / Polymer Engineering / Technology        |
| 2. | <b>Proctor's Qualification and experience in relevant sector (in years)</b> <i>(as per NCVET guidelines)</i>                 | Diploma with minimum 6 years experience in the field of Plastics / Polymer Engineering / Technology<br>Or<br>B.E. / B.Tech. with minimum 3 years experience in the field of Plastics / Polymer Engineering / Technology        |
| 3. | <b>Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)</b> <i>(as per NCVET guidelines)</i> | B.E. / B.Tech. with minimum 4 years experience in the field of Plastics / Polymer Engineering / Technology<br>Or<br>M.E. / M.Tech. with minimum 2 years experience in the field of Plastics / Polymer Engineering / Technology |
| 4. | <b>Assessment Mode</b> <i>(Specify the assessment mode)</i>                                                                  | Physical Assessment                                                                                                                                                                                                            |
| 5. | <b>Tools and Equipment Required for Assessment</b>                                                                           | <input checked="" type="checkbox"/> Same as for training <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(details to be provided in Annexure-if it is different for Assessment)</i>                                |

### Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

|    |                                                                                                        |
|----|--------------------------------------------------------------------------------------------------------|
| 1. | <b>Latest Skill Gap Study (not older than 2 years)(Yes/No): NO</b>                                     |
| 2. | <b>Latest Market Research Reports or any other source (not older than 2years) (Yes/No): NO</b>         |
| 3. | <b>Government /Industry initiatives/ requirement (Yes/No): YES</b>                                     |
| 4. | <b>Number of Industry validation provided: 06 Nos.</b>                                                 |
| 5. | <b>Estimated nos. of persons to be trained and employed: 1500 Candidates</b>                           |
| 6. | <b>Evidence of Concurrence/Consultation with Line Ministry/State Departments: YES</b><br>If "No", why: |

## Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

|    |                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | <b>Annexure:</b> NCrf/NSQF level justification based on NCrf level/NSQF descriptors (Mandatory)                      | <ul style="list-style-type: none"> <li>Entry Qualification for this course is Grade 11<sup>th</sup> with No Experience required<br/>OR<br/>Grade 10<sup>th</sup> or equivalent with 1.5 years relevant experience<br/>OR<br/>Grade 8<sup>th</sup> with 4.5 years relevant experience<br/>OR<br/>Previous relevant Qualification of NSQF Level 3 with 1.5 years relevant experience</li> <li>After successful completion of training, Trainees / Candidates are eligible for Shift Incharge/ Supervisor in the Plastics Processing Industry.</li> <li>Job description: The Machine operator handles the plastic granules (raw material), sets up and operates the Injection Moulding Machine &amp; Auxiliary Equipment, finishes the product &amp; stores in the desired place.</li> </ul>                                                                                                                                                                                                                                                                                               |
| 2. | <b>Annexure:</b> List of tools and equipment relevant for qualification (Mandatory, except in case of online course) | <p><b>1.Class Room equipment's:</b> LCD Projector/Screen, Computer, Power point pointer, Study material, charts, White board &amp; Duster.</p> <p><b>2.Measuring equipment's:</b>Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gage, Steel measuring tape, Weighing Balance (1 No.)</p> <p><b>3.Hand Tools:</b>Hammer, screw driver set with Multiple heads, Allen key hexagonal , File triangular, Hacksaw, adjustable, Spanner set double side, Adjustable spanner</p> <p><b>4.Personal Protective Equipment:</b>Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, First Aid Box with Medicines</p> <p><b>5.Plastics raw material:</b>PP, HDPE, PVC Extrusion Grade</p> <p><b>6.Mould&amp; Die:</b>Die head for HDPE Pipe 25mm,PVC pipe 40mm,30mm Die Blown Film</p> <p><b>7.Auxiliaries equipment's:</b>Automatic Hopper Loader, Hot air oven and Dryer, Dehumidifier, Mould Temperature Controller, Scrap Grinder, Crane, Air Compressor, Hot air blow Gun, Water cooling Tower, Water Chilling Plant Automatic Hopper Loader.</p> |



|    |                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    |                                                                                                        | <p>8. Single Screw pipe Extrusion plant ( HDPE) with accessories</p> <p>9. Twin screw pipe Extrusion plant ( PVC) with accessories</p> <p>10. Blown Film Extruder Single Layer</p> <p>11. Blown Film Extruder Multi Layer</p> <p>12. PVC compound Mixer</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. | <b>Annexure:</b> Detailed Assessment Criteria (Mandatory)                                              | <ol style="list-style-type: none"> <li>1. Criteria for assessment for each Qualification Document will be created by CIPET.</li> <li>2. Each Assessable outcome (AO) will be assigned marks proportional to its importance in Learning Outcome and few performance criteria may be allotted marks in combine.</li> <li>3. Each Learning Outcome will be assessed both for theoretical knowledge and practical which is being proportionately demonstrated in the table below.</li> <li>4. The assessment for the theory part will be based on knowledge bank of questions created by CIPET which will contain multiple choice theory questions and Practical question database with mark allotment criteria.</li> <li>5. To pass the Qualification Pack, every trainee should score a minimum of 50 % in Functional and all Generic Learning Outcome's.</li> <li>6. In case of successfully passing only certain number of Learning Outcome's, the trainee is eligible to take Subsequent assessment on the balance Learning Outcome's to pass the Qualification Document.</li> </ol>                                                                                       |
| 4. | <b>Annexure:</b> Assessment Strategy(Mandatory)                                                        | <p><b>Assessment strategy:</b></p> <ul style="list-style-type: none"> <li>• Assessment criteria for Qualification Document have been developed. Each Learning Outcome have separate marks for Theory and Practical Skills.</li> <li>• The Training Assessment Wing will have assessors who will not be associated with training activities and will be provided training on the said work. Thus it will ensure that the assessment carried out is fair and consistent.</li> <li>• Set of question bank developed to assess the theoretical and practical knowledge. To ensure the quality, each trainees get the unique set of question</li> <li>• Student has to score minimum marks separately for theoretical and practical skill and overall percentage should also be 50% for theory and 70% for practical.</li> <li>• Empanelment of subject matter expert as assessor to assess trainee specifically on practical skills</li> <li>• Assessments are preferably conducted by written examination papers in English/ regional languages according to the requirement.</li> <li>• It has been ensure that TP/trainer should not be present during assessment</li> </ul> |
| 5. | <b>Annexure:</b> Blended Learning (Mandatory, in case selected Mode of delivery is "Blended Learning") | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|     |                                                                                                                |                                 |
|-----|----------------------------------------------------------------------------------------------------------------|---------------------------------|
| 6.  | <b>Annexure:</b> Multiple Entry-Exit Details <i>(Mandatory, in case qualification has multiple Entry-Exit)</i> | -                               |
| 7.  | <b>Annexure:</b> Acronym and Glossary <i>(Optional)</i>                                                        | -                               |
| 8.  | <b>Supporting Document:</b> Model Curriculum <i>(Mandatory – Public view)</i>                                  | <i>Enclosed as Annexure-I</i>   |
| 9.  | <b>Supporting Document:</b> Career Progression <i>(Mandatory - Public view)</i>                                | <i>Enclosed as Annexure-II</i>  |
| 10. | <b>Supporting Document:</b> Occupational Map <i>(Mandatory)</i>                                                | <i>Enclosed as Annexure-III</i> |
| 11. | <b>Supporting Document:</b> Assessment SOP <i>(Mandatory)</i>                                                  | <i>Enclosed as Annexure-IV</i>  |
| 12. | <b>Any other document you wish to submit:</b> Industry validation                                              | <i>Enclosed as Annexure-V</i>   |

## 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 | <p>Machine Operator - Plastics Extrusion is expected to ensure housekeeping and safety in the production area and select the correct die, etc. he/she has to-</p> <ul style="list-style-type: none"> <li>• Understanding the work order and the process requirement from the supervisor</li> <li>• Arranging the required raw material and Dies for the process</li> <li>• To interact with the supervisor in order to understand the production schedule</li> <li>• To plan the day's production activities based on the supervisor's instructions</li> <li>• To collect material data sheet, machine instructions and work manuals</li> <li>• To ensure availability of consumables and plastics materials for production in sufficient quantity as per production plan/supervisor instructions.</li> <li>• Clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors.</li> <li>• Check availability of the personal protective equipment's (PPE) like Gloves, Goggles etc.</li> <li>• Ensure that the required material is procured from the store before starting the process</li> <li>• Understand the dies required for executing the required operation and ensure that the same is available for operation.</li> <li>• If die is not available collect the same from die storage area</li> <li>• Add the raw material in the machine using material loader or by manual feeding.</li> <li>• Ensure dies are clean if not clean with soft cotton cloth.</li> <li>• Ensure cleaning of the area around the apparatus for any oil, grease, combustible substances etc. so as to prevent any accident</li> <li>• Ensure availability of the coolant and working of valves to circulate the coolant to cool and solidify plastic.</li> <li>• Understanding Types of Plastics used in Extrusion and Its Properties.</li> <li>• Understand the raw material like plastics granules, fillers, bonding additives etc. required for executing the activity</li> <li>• Refer the queries to supervisor if they cannot be resolved by the operator</li> </ul> | <p>Machine Operator - Plastics Extrusion job requires limited range of activities which are familiar and predictable like availability of consumables, safety PPE, raw material used, basic machine parts and its functions etc.</p> <p>He should understand the raw material like plastics granules, fillers, bonding additives etc. required for executing the activity, Dies required, their types etc.</p> | 3.5             |

|                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                       |     |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                                                                                             | <ul style="list-style-type: none"> <li>Confirm self - understanding to the supervisor once the query is resolved so that all doubts &amp; queries can be resolved before the actual process execution</li> <li>He is responsible for checking the operations of the equipment</li> <li>Feeding the granules as per requirement</li> <li>Perform visual inspection of the output products</li> <li>Achieve productivity, quality and safety standards as per company's norms</li> <li>Report problems to supervisor</li> <li>He will be responsible for Inspecting the finished components</li> <li>keeping records of production and defects</li> <li>conducting minor repair/de-flashing if any on output parts which can be reworked</li> <li>The role holder will interact with maintenance team and material management team</li> <li>The individual needs to ensure sorting, streamlining &amp; organizing, storage and documentation, cleaning, standardization and sustenance across the plant and office premises of the organization</li> <li>He needs to understand Market Information Management</li> <li>Client Relation Management</li> <li>Marketing knowhow and strategy</li> </ul> <p>He also needs to understand and practice Entering, update and maintain data in MS Office system/ Office open source system.</p> |                                                                                                                                                                                                                                                                                       |     |
| <b>Professional and Technical Skills/ Expertise/ Professional Knowledge</b>                 | <p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>Raw material like plastics granules, fillers, bonding additives etc. required for executing the activity</li> <li>Storing and Handling of Raw Materials and House Keeping Machine Cleanliness and safety requirements for commencing Compounding Mixing &amp; Blender.</li> <li>General Principle, process knowledge &amp; working procedure of extrusion machine.</li> <li>Identification &amp; troubleshooting the various defects in products produced in extrusion machine.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Machine Operator - Plastics Extrusion should understand and know factual knowledge about process, principle of plastics extrusion Technique and its operation, trouble shooting, Quality and Inspection etc.                                                                          | 3.5 |
| <b>Employment Readiness &amp; Entrepreneurship Skills &amp; Mind-set/Professional Skill</b> | <p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>General principles of plastics extrusion and process knowledge, die loading and unloading procedure, parameter settings etc.</li> <li>Types of plastics like thermoplastics and the additives &amp; grades to be used tonnage and capacity of the machine being operated.</li> <li>Different types of tools and machinery to process the plastic and trim the output</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Machine Operator - Plastics Extrusion should recall general principles of Plastics Extrusion procedure and process knowledge which may be repetitive type of work in the area allotted, Types of plastics like thermoplastics and the additives & grades to be used, Dies, Its types, | 3.5 |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                            |     |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                                           | <ul style="list-style-type: none"> <li>• Various types of cooling systems and their properties.</li> <li>• How to perform extrusion machine safety check</li> <li>• Hazards and safety aspects involved in tape production and usage of relevant PPEs</li> <li>• Safety procedures to be adopted to complete die removal process</li> </ul> <p>Detect problems in day to day tasks:</p> <ul style="list-style-type: none"> <li>• Support operator in using specific problem solving techniques and detailing out the problems</li> <li>• Discuss possible solution with the supervisor for problem solving.</li> </ul> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>• Plan and organize the work order and jobs received from the internal customers/ operator.</li> <li>• Organize all process/ equipment manuals so that sorting out</li> </ul> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>• Follow instructions and work on areas of improvement identified</li> <li>• Complete the assigned tasks with minimum supervision</li> <li>• Complete the job defined by the operator within the timelines and quality.</li> </ul> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>• Use common sense and make judgments during day to day basis.</li> <li>• Use basic reasoning skills to identify and resolve basic problems</li> <li>• Use intuition to detect any potential problems which could arise during operations.</li> <li>• He needs to know about entrepreneurship associated with plastics extrusion, its concepts etc.</li> <li>• He needs to know about marketing strategy involved for the products manufactured, market availability etc.</li> </ul> | <p>application etc. Thus he should demonstrate practical skill, routine and repetitive in Plastics Extrusion application/ process, he should also understand quality concepts and use in the area of work allotted.</p>                                                    |     |
| <b>Broad Learning Outcomes/Core Skill</b> | <p>The user/ individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>• How to be able to read warnings, instructions and other text material on product labels, components etc</li> <li>• How to enter into the history card details of the fault identified in the plastic product manufactured read equipment manuals and process documents to understand the equipment and processes better.</li> <li>• Read instructions especially safety instructions especially symbols while using the equipment in the plant area logs.</li> </ul> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>• Discuss task lists, schedules, and work-loads with co-workers/assistants and supervisors</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <p>Machine Operator - Plastics Extrusion should be able to read /write warnings, instructions and other text material on product labels, components etc with minimum required clarity, should have skill of basic arithmetic, like raw material weights additions etc.</p> | 3.5 |

|                       |                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                            |     |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
|                       | <ul style="list-style-type: none"> <li>• Question internal customers/ Shop floor operator appropriately in order to understand the nature of the problem and make a diagnosis.</li> <li>• Avoid using jargon, slang or acronyms when communicating with an operator /fellow subordinates etc. Unless it is required.</li> </ul>                                                  |                                                                                                                                                                                                                            |     |
| <b>Responsibility</b> | Machine Operator - Plastics Extrusion is responsible for his own job and self-learning. He/she Set up basic as well as all critical process parameters, plastics raw material handling and operate Plastics Extrusion Machine in order to produce good quality products as per approved specifications by supervisor. He may need to control/ check multiple machines at a time. | Machine Operator - Plastics Extrusion is responsible for plastics raw material handling, mixing / compounding (if required), performing the extrusion operation to produce Plastics Pipes / Films as per the requirements. | 3.5 |

## Annexure: Tools and Equipment (Lab Set-Up)

## List of Tools and Equipment

Batch Size: Maximum 50 candidates per batch

| S. No. | Tool / Equipment Name          | Specification                                                                                                                                                                                                           | Quantity for specified Batch size |
|--------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| 1.     | Measuring equipments           | Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gage, Steel measuring tape, Weighing Balance (1 No.)                                                                                                     | As per requirement                |
| 2.     | Hand Tools                     | Hammer, screw driver set with Multiple heads, Allen key hexagonal, File triangular, Hacksaw, adjustable, Spanner set double side, Adjustable spanner                                                                    | As per requirement                |
| 3.     | Personal Protective equipments | Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, First Aid Box with Medicines                                                                                                          | As per requirement                |
| 4.     | Plastics raw material          | PP, HDPE, PVC Extrusion Grade for training on Extrusion machines                                                                                                                                                        | As per requirement                |
| 5.     | Mould & Die                    | Die head for HDPE Pipe 25mm, PVC pipe 40mm, 30mm Die Blown Film                                                                                                                                                         | As per requirement                |
| 6.     | Auxiliaries equipments         | Automatic Hopper Loader, Hot air oven and Dryer, Dehumidifier, Mould Temperature Controller, Scrap Grinder, Crane, Air Compressor, Hot air blow Gun, Water cooling Tower, Water Chilling Plant Automatic Hopper Loader. | As per requirement                |

## Classroom Aids

The aids required to conduct sessions in the classroom are:

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

## Annexure: Industry Validations Summary

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

| S. No | Organization Name                                                                  | Representative Name       | Designation      | Contact Address                                                                                   | Contact Phone No | E-mail ID                                                                | LinkedIn Profile (if available) |
|-------|------------------------------------------------------------------------------------|---------------------------|------------------|---------------------------------------------------------------------------------------------------|------------------|--------------------------------------------------------------------------|---------------------------------|
| 1.    | Metroplast Industries                                                              | Mr. Atanu Kumar Das       | Q. C. Manager    | Kuruda, Near Kuruda Fly Over, NH-5, Balasore – 756 056, Odisha                                    | 8847894040       | Metro_plast@yahoo.com                                                    | -                               |
| 2.    | Gautam Plastics & Industries                                                       | Mr. Runit Marda           | Partner          | 32-B/21-B1, Tifra Industrial Estate, Bilaspur – 495 223, Chhattisgarh                             | 9691299992       | Gautamplastics.ind@gmail.com                                             | -                               |
| 3.    | SKC Poly Engineering Pvt. Ltd.,                                                    | Mr. Rajendra R. Chaudhari | Director         | Plot No. A-41 & A-42/01, MIDC Area, Shendra, Chh. Sambhajinagar, Aurangabad – 431007, Maharashtra | 9822202071       | skcpoly@gmail.com                                                        | -                               |
| 4.    | Mahashakti Pipe Industries (A Unit of Baba Lokenath Agrotech Industries Pvt. Ltd., | Mr. Vivek Singh           | Manager          | Vill- Saidpurtola, P.O. – Karota, Patna – 803 202                                                 | 9330000933       | mahashaktipipe@gmail.com                                                 | -                               |
| 5.    | Mukand Poly Products                                                               | Mr. Lakhyadhar Das        | QCI              | Plot No.: 38, Vill – Sila, Amingaon, Guwahati – 781 031                                           | 6002297488       | <a href="mailto:mukandpoly@mukandgroup.in">mukandpoly@mukandgroup.in</a> | -                               |
| 6.    | Nagarjuna Polymers                                                                 | Ms. Preeti Srivastava     | Quality Incharge | Plot No.: 206/8&9, IDA Phase-II, Cherlapally, Hyderabad – 500 051 (Telangana)                     | 7981840052       | info@nagarjunapolymers.com                                               | -                               |



## Annexure: Training &amp; Employment Details

## Training and Employment Projections:

| Year    | Total Candidates     |                                    | Women                |                                    | People with Disability |                                    |
|---------|----------------------|------------------------------------|----------------------|------------------------------------|------------------------|------------------------------------|
|         | Estimated Training # | Estimated Employment Opportunities | Estimated Training # | Estimated Employment Opportunities | Estimated Training #   | Estimated Employment Opportunities |
| 2024-25 | 500                  | 400                                | 50                   | 37                                 | -                      | -                                  |
| 2025-26 | 600                  | 500                                | 55                   | 40                                 | -                      | -                                  |
| 2026-27 | 700                  | 600                                | 60                   | 55                                 | -                      | -                                  |

Data to be provided year-wise for next 3 years

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

| Qualification Version | Year    | Total Candidates |          |           |        | Women   |          |           |        | People with Disability |          |           |        |
|-----------------------|---------|------------------|----------|-----------|--------|---------|----------|-----------|--------|------------------------|----------|-----------|--------|
|                       |         | Trained          | Assessed | Certified | Placed | Trained | Assessed | Certified | Placed | Trained                | Assessed | Certified | Placed |
| 1.0                   | 2021-22 | 291              | 291      | 291       | 244    | 31      | 31       | 31        | 26     | -                      | -        | -         | -      |
| 1.0                   | 2022-23 | 696              | 696      | 696       | 584    | 125     | 125      | 125       | 101    | -                      | -        | -         | -      |
| 1.0                   | 2023-24 | 283              | 283      | 283       | 232    | 28      | 28       | 28        | 22     | -                      | -        | -         | -      |

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

## List Schemes in which the previous version of Qualification was implemented:

1. CSR Scheme
2. PM-DAKSH Scheme
3. NSSH Scheme

## Content availability for previous versions of qualifications:

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

Languages in which Content is available: English & Hindi

## Annexure: Blended Learning

## Blended Learning Estimated Ratio &amp; 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      | <input type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge                    |                                                      |                        |
| 2      | <input type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners |                                                      |                        |
| 3      | <input type="checkbox"/> Showing Practical Demonstrations to the learners                                     |                                                      |                        |
| 4      | <input type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training         |                                                      |                        |
| 5      | <input type="checkbox"/> Tutorials/ Assignments/ Drill/ Practice                                              |                                                      |                        |
| 6      | <input type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations                           |                                                      |                        |
| 7      | <input type="checkbox"/> On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training          |                                                      |                        |

## Annexure: Detailed Assessment Criteria

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

| NOS/Module Name                                                                                 | Assessment Criteria for Performance Criteria/Learning Outcomes                                                                                                                  | Theory Marks | Practical Marks | Project Marks | Viva Marks |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------|---------------|------------|
| 1.CPC/N0319<br>Understand the Basics of Plastics Raw Material & concept of Extrusion Techniques | AO1. Understanding Types of Plastics used in Extrusion and Its Properties.                                                                                                      | 2            | 3               |               |            |
|                                                                                                 | AO2. Selection Plastics Raw Materials based on the Items Produced.                                                                                                              | 2            | 3               |               |            |
|                                                                                                 | AO3. Storing and Handling of Raw Materials and House Keeping.                                                                                                                   | 2            | 3               |               |            |
|                                                                                                 | AO4. Types of Extruders Used in the Extrusion Process and their Parts.                                                                                                          | 2            | 3               |               |            |
|                                                                                                 | AO5. Types of Dies Used for different Extruded Products.                                                                                                                        | 2            | 3               |               |            |
|                                                                                                 | AO6. Haul Off Units.                                                                                                                                                            | 1            | 3               |               |            |
|                                                                                                 | AO7. Storing and Handling of Finished Products and House Keeping.                                                                                                               | 2            | 3               |               |            |
|                                                                                                 | AO8. Types of Additives, Master Batches & Pigments.                                                                                                                             | 1            | 3               |               |            |
|                                                                                                 | AO9. Types of Mixing and Compounding.                                                                                                                                           | 1            | 3               |               |            |
|                                                                                                 | AO10. Measurement of Additives and Materials and Maintaining Formulations.                                                                                                      | 1            | 3               |               |            |
|                                                                                                 | AO11. Storing, Handling of Raw Materials in Compounding Area and House Keeping.                                                                                                 | 1            | 3               |               |            |
|                                                                                                 | AO12. Understanding Safety Equipments and Its Use.                                                                                                                              | 1            | 3               |               |            |
|                                                                                                 | AO13. Do's and Don't in Area of Operation.                                                                                                                                      | 1            | 2               |               |            |
|                                                                                                 | AO14. Safety Precaution Majors before Operations.                                                                                                                               | 1            | 2               |               |            |
|                                                                                                 | <b>Sub total</b>                                                                                                                                                                | <b>20</b>    | <b>40</b>       |               |            |
| 2.CPC/N0411<br>Maintain basic Health & Safety Practices at the workplace.                       | AO1. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise etc. | 0.5          | 2               |               |            |
|                                                                                                 | AO2. Identify areas in the work places which are potentially hazardous/ unhygienic in nature.                                                                                   | 0.5          | 2               |               |            |
|                                                                                                 | AO3. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.                               | 0.5          | 1               |               |            |
|                                                                                                 | AO4. Inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc.                                        | 0.5          | 1               |               |            |
|                                                                                                 | AO5. Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.                                              | 0.5          | 1               |               |            |
|                                                                                                 | AO6. Create awareness amongst other by sharing information on the identified risks.                                                                                             | 0.5          | 1               |               |            |
|                                                                                                 | AO7. Support the Safety team and the supervisor in creating the risk mitigation plan.                                                                                           | 0.5          | 1               |               |            |
|                                                                                                 | AO8. Follow the instructions given on the equipment manual describing the operating process of the equipment.                                                                   | 0.5          | 1               |               |            |
|                                                                                                 | AO9. Follow the Safety, Health and Environment related practices developed by the organization.                                                                                 | 0.5          | 2               |               |            |
|                                                                                                 | AO10. Ensure relevant safety boards/ signs are placed on the shop floor.                                                                                                        | 1            | 2               |               |            |
|                                                                                                 | AO11. Operate the machine using the recommended Personal Protective Equipment (PPE) and ensure team members also use the related PPEs at the workplace.                         | 1            | 2               |               |            |
|                                                                                                 | AO12. Maintain a clean and safe working environment near the work place and ensure there is no spillage of chemicals, production waste, oil, solvents etc.                      | 0.5          | 2               |               |            |
|                                                                                                 | AO13. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques.                                                                           | 0.5          | 2               |               |            |

|                                                                                    |                                                                                                                                                                        |           |           |  |  |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--|--|
|                                                                                    | AO14. Maintain high standards of personal hygiene at the work place.                                                                                                   | 0.5       | 2         |  |  |
|                                                                                    | AO13. Ensure that the waste disposal is done in the designated area and manner as per organization SOP.                                                                | 0.5       | 2         |  |  |
|                                                                                    | AO16. Inform appropriately the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others. | 0.5       | 2         |  |  |
|                                                                                    | AO17. Immediate First Aid action to be taken in case of any fatal accident due to Fire, Electricity, Gas, Chemicals etc.                                               | 0.5       | 2         |  |  |
|                                                                                    | AO18. Immediate Action to be taken in case Fire, Gas, Chemicals etc.                                                                                                   | 0.5       | 2         |  |  |
|                                                                                    | <b>Sub total</b>                                                                                                                                                       | <b>10</b> | <b>30</b> |  |  |
| 3. CPC/N0321<br>Understand the basics & importance of Plastics Compounding /Mixing | AO1. Understanding Types of Chemicals, Additives and Colorants.                                                                                                        | 1         | 2         |  |  |
|                                                                                    | AO2. Properties and Importance of Chemicals, Additives and Colorants and Pigments.                                                                                     | 1         | 2         |  |  |
|                                                                                    | AO3. Properties changes by adding Chemicals, additives and pigments in Plastics..                                                                                      | 2         | 2         |  |  |
|                                                                                    | AO4. Formulation laid down for different Products                                                                                                                      | 3         | 4         |  |  |
|                                                                                    | AO5. Types of Blenders , Mixers and their Parts                                                                                                                        | 3         | 4         |  |  |
|                                                                                    | AO6. Preparation Batches as per the formulations.                                                                                                                      | 2         | 4         |  |  |
|                                                                                    | AO7. Loading and unloading of Batches.                                                                                                                                 | 2         | 4         |  |  |
|                                                                                    | AO8. Temperature, Pressure and Speed involved in Blenders and Mixers.                                                                                                  | 3         | 4         |  |  |
|                                                                                    | AO9. Importance of each and every Parameters.                                                                                                                          | 3         | 4         |  |  |
|                                                                                    | AO10. Precaution to be taken care during the batch preparation.                                                                                                        | 2         | 4         |  |  |
|                                                                                    | AO11. Storing of batches after preparation.                                                                                                                            | 2         | 4         |  |  |
|                                                                                    | AO12. Understanding Safety Equipments and Its Use.                                                                                                                     | 2         | 4         |  |  |
|                                                                                    | AO13. Do's and Don't in Area of Operations.                                                                                                                            | 2         | 4         |  |  |
|                                                                                    | AO14. Safety Precaution Majors before Operations.                                                                                                                      | 2         | 4         |  |  |
|                                                                                    | <b>Sub total</b>                                                                                                                                                       | <b>30</b> | <b>50</b> |  |  |
| 4. CPC/N0322<br>Perform HDPE /PVC Pipe Extruder Machine Operation                  | AO1. Types of HDPE / PVC Extruders.                                                                                                                                    | 3         | 3         |  |  |
|                                                                                    | AO2. Extruder Parts and Their Functions.                                                                                                                               | 3         | 4         |  |  |
|                                                                                    | AO3. Pressure and Vacuum Sizing Units                                                                                                                                  | 2         | 4         |  |  |
|                                                                                    | AO4. Types of Dies Used for different Extruded Pipes.                                                                                                                  | 3         | 4         |  |  |
|                                                                                    | AO5. Operations of Haul Off Units.                                                                                                                                     | 1         | 4         |  |  |
|                                                                                    | AO6. Dismantling and assembling Extruder Parts.                                                                                                                        | 2         | 4         |  |  |
|                                                                                    | AO7. Safety Precaution taken during assembling and disassembling.                                                                                                      | 2         | 4         |  |  |
|                                                                                    | AO8. Common Process Parameter like Temperature, Pressure and Speed and its controls.                                                                                   | 2         | 4         |  |  |
|                                                                                    | AO9. Effect of process parameters on Product Properties.                                                                                                               | 2         | 4         |  |  |
|                                                                                    | AO10. Trial Production and checking product stabilization.                                                                                                             | 2         | 4         |  |  |
|                                                                                    | AO11. Actual Production and Parameter / Process Control.                                                                                                               | 2         | 4         |  |  |
|                                                                                    | AO12. Quality Check and Continuous Production.                                                                                                                         | 2         | 3         |  |  |
|                                                                                    | AO13. Post production and storing.                                                                                                                                     | 2         | 4         |  |  |
|                                                                                    | AO14. Common faults found and trouble shooting.                                                                                                                        | 2         | 4         |  |  |

|                                                                           |                                                                                                                                      |           |           |  |  |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--|--|
|                                                                           |                                                                                                                                      |           |           |  |  |
|                                                                           | AO15. Segregation of faulty product and action taken.                                                                                | 2         | 4         |  |  |
|                                                                           | AO16. Disposal of faulty products as per laid down procedure.                                                                        | 2         | 3         |  |  |
|                                                                           | AO17. Understanding Safety Equipments and Its Use.                                                                                   | 2         | 3         |  |  |
|                                                                           | AO18. Do's and Don't in Area of Operations.                                                                                          | 2         | 3         |  |  |
|                                                                           | AO19. Safety Precaution Majors before Operations.                                                                                    | 2         | 3         |  |  |
|                                                                           | <b>Sub Total</b>                                                                                                                     | <b>40</b> | <b>70</b> |  |  |
| 5. CPC/N0323<br>Perform the Plastic<br>Film Extruder<br>Machine Operation | AO1. Types of Film Extruders.                                                                                                        | 1         | 2         |  |  |
|                                                                           | AO2. Extruder Parts and Their Functions.                                                                                             | 3         | 2         |  |  |
|                                                                           | AO3. Air Compressor Pressure Sizing Units.                                                                                           | 3         | 4         |  |  |
|                                                                           | AO4. Types of Dies Used for different Extruded Films.                                                                                | 2         | 4         |  |  |
|                                                                           | AO5. Operations of Haul Off Units.                                                                                                   | 2         | 4         |  |  |
|                                                                           | AO6. Dismantling and assembling Extruder Parts.                                                                                      | 2         | 4         |  |  |
|                                                                           | AO7. Safety Precaution taken during assembling and disassembling.                                                                    | 2         | 5         |  |  |
|                                                                           | AO8. Common Process Parameter like Temperature, Pressure and Speed and its controls.                                                 | 3         | 5         |  |  |
|                                                                           | AO9. Effect of process parameters on Product Properties                                                                              | 3         | 5         |  |  |
|                                                                           | AO10. Trial Production and checking product stabilization.                                                                           | 3         | 5         |  |  |
|                                                                           | AO11. Actual Production and Parameter / Process Control.                                                                             | 3         | 6         |  |  |
|                                                                           | AO12. Quality Check and Continuous Production, Post production and storing.                                                          | 2         | 5         |  |  |
|                                                                           | AO13. Common faults found and trouble shooting.                                                                                      | 2         | 4         |  |  |
|                                                                           | AO14. Segregation of faulty product and action taken.                                                                                | 2         | 4         |  |  |
|                                                                           | AO15. Disposal of faulty products as per laid down procedure.                                                                        | 2         | 4         |  |  |
|                                                                           | AO16. Understanding Safety Equipments and Its Use.                                                                                   | 2         | 4         |  |  |
|                                                                           | AO17. Do's and Don't in Area of Operations.                                                                                          | 2         | 2         |  |  |
|                                                                           | AO18. Safety Precaution Majors before Operations.                                                                                    | 1         | 1         |  |  |
|                                                                           | <b>Sub Total</b>                                                                                                                     | <b>40</b> | <b>70</b> |  |  |
| 6. CPC/N0324<br>To Carryout House<br>Keeping                              | AO1. Take an overlook of the Area under House Keeping.                                                                               | 0.5       | 2         |  |  |
|                                                                           | AO2. Put appropriate Signage immediately if oily substance / Water spills on the floor to avoid accident.                            | 0.5       | 2         |  |  |
|                                                                           | AO3. If certain housekeeping activities require to be performed by housekeeping staffs, the Inform them.                             | 0.5       | 2         |  |  |
|                                                                           | AO4. If it has to be carried out by self then, Identify the material / equipment required for cleaning the areas.                    | 0.5       | 2         |  |  |
|                                                                           | AO5. Plan the sequence for cleaning the area to avoid re-soiling the cleaned areas and surfaces.                                     | 0.5       | 2         |  |  |
|                                                                           | AO6. Display the appropriate signage for the work being conducted.                                                                   | 0.5       | 2         |  |  |
|                                                                           | AO7. Ensure that there is adequate ventilation for the work being carried out.                                                       | 1         | 2         |  |  |
|                                                                           | AO8. Wear the personal protective equipment required for the cleaning method and materials being used.                               | 1         | 4         |  |  |
|                                                                           | AO9. With right cleaning process carry out cleaning activities without disturbing others.                                            | 1         | 4         |  |  |
|                                                                           | AO10. Report to the appropriate person if any difficulties in carrying out your work.                                                | 1         | 4         |  |  |
|                                                                           | AO11. Ensure that there is no oily substance / Water spill on the floor, If found the put the Signage immediately to avoid accident. | 0.5       | 4         |  |  |
|                                                                           | AO12. Follow workplace procedures to deal with any accidental damage caused during the cleaning process.                             | 0.5       | 2         |  |  |

|                                                                                                                    |                                                                                                                                                                                                                                                                                             |           |           |  |  |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|--|--|
|                                                                                                                    | AO13. Ensure that, on completion of the work, the area is left clean and dry and free from any leftover or scrap.                                                                                                                                                                           | 0.5       | 2         |  |  |
|                                                                                                                    | AO14. Return the equipment, materials and personal protective equipment that were used to the right places and check the inventory for the next cycle.                                                                                                                                      | 0.5       | 2         |  |  |
|                                                                                                                    | AO15. Dispose the waste garnered from the activity in an appropriate manner.                                                                                                                                                                                                                | 0.5       | 2         |  |  |
|                                                                                                                    | AO16. Maintain schedules and records for housekeeping duty.                                                                                                                                                                                                                                 | 0.5       | 2         |  |  |
|                                                                                                                    | <b>Sub Total</b>                                                                                                                                                                                                                                                                            | <b>10</b> | <b>20</b> |  |  |
| 7. CPC/N0315<br>Reporting &<br>Documentation                                                                       | AO1. Report data/problems/incidents as per the laid down procedure in the prescribed format and registers.                                                                                                                                                                                  | 1         | 2         |  |  |
|                                                                                                                    | AO2. Report to the appropriate authority as laid down by the company procedure.                                                                                                                                                                                                             | 1         | 4         |  |  |
|                                                                                                                    | AO3. Identify documentation to be completed relating to the job profile.                                                                                                                                                                                                                    | 1         | 4         |  |  |
|                                                                                                                    | AO4. Record details accurately in an appropriate format.                                                                                                                                                                                                                                    | 2         | 4         |  |  |
|                                                                                                                    | AO5. Complete all documentation within stipulated time according to company procedure.                                                                                                                                                                                                      | 1         | 4         |  |  |
|                                                                                                                    | AO6. Make sure documents are available to all appropriate authorities to inspect.                                                                                                                                                                                                           | 2         | 4         |  |  |
|                                                                                                                    | AO7. Respond to requests for information in an appropriate manner whilst following organizational procedures.                                                                                                                                                                               | 1         | 4         |  |  |
|                                                                                                                    | AO8. Inform the appropriate authority of requests for information received.                                                                                                                                                                                                                 | 1         | 4         |  |  |
|                                                                                                                    | <b>Sub Total</b>                                                                                                                                                                                                                                                                            | <b>10</b> | <b>30</b> |  |  |
| 8:CPC/N0316 To<br>carryout basic<br>quality check of<br>finished products<br>with reference to<br>approved product | AO1. Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts.                                                                                                                                               | 1         | 4         |  |  |
|                                                                                                                    | AO2. Use appropriate measuring instruments, equipment, tools, accessories etc., as prescribed / required.                                                                                                                                                                                   | 1         | 4         |  |  |
|                                                                                                                    | AO3. Identify non-conformities to quality assurance standards.                                                                                                                                                                                                                              | 1         | 4         |  |  |
|                                                                                                                    | AO4. Identify potential causes of non-conformities to quality assurance standards.                                                                                                                                                                                                          | 2         | 4         |  |  |
|                                                                                                                    | AO5. Identify impact on final product due to non-conformance to prescribed Standards.                                                                                                                                                                                                       | 2         | 6         |  |  |
|                                                                                                                    | AO6. Evaluating the need for action to ensure that problems do not reoccur.                                                                                                                                                                                                                 | 3         | 6         |  |  |
|                                                                                                                    | AO7. Suggest corrective action to address problem.                                                                                                                                                                                                                                          | 2         | 6         |  |  |
|                                                                                                                    | AO8. Review effectiveness of corrective action.                                                                                                                                                                                                                                             | 2         | 6         |  |  |
|                                                                                                                    | AO9. Interpret the results of the quality check correctly.                                                                                                                                                                                                                                  | 2         | 6         |  |  |
|                                                                                                                    | AO10. Take up results of the findings with QC in charge/appropriate authority.                                                                                                                                                                                                              | 2         | 6         |  |  |
|                                                                                                                    | AO11. Take up the results of the findings within stipulated time.                                                                                                                                                                                                                           | 2         | 6         |  |  |
|                                                                                                                    | AO12. Record of results of action taken.                                                                                                                                                                                                                                                    | 2         | 6         |  |  |
|                                                                                                                    | AO13. Record adjustments not covered by established procedures for future reference.                                                                                                                                                                                                        | 3         | 6         |  |  |
|                                                                                                                    | AO14. Review effectiveness of action taken.                                                                                                                                                                                                                                                 | 2         | 6         |  |  |
|                                                                                                                    | AO15. Follow reporting procedures where the cause of defect cannot be identified.                                                                                                                                                                                                           | 3         | 4         |  |  |
|                                                                                                                    | <b>Sub Total</b>                                                                                                                                                                                                                                                                            | <b>30</b> | <b>80</b> |  |  |
| DGT/VSQ/N0101<br>Employability Skills                                                                              | AO1. Discuss the importance of Employability Skills in meeting the job requirements.                                                                                                                                                                                                        | 1         | 1         |  |  |
|                                                                                                                    | AO2. Use appropriate basic English sentences/phrases while speaking, Demonstrate how to communicate in a well - mannered way with others & working with others in a team.                                                                                                                   | 1         | 1         |  |  |
|                                                                                                                    | AO3. Discuss the significance of using financial products and services safely and securely. Explain the importance of managing expenses, income, and savings & Explain the significance of approaching the concerned authorities in time for any exploitation as per legal rights and laws. | 2         | 2         |  |  |
|                                                                                                                    | AO4. Discuss the significance of using the internet for browsing, accessing social media platforms, safely and securely.                                                                                                                                                                    | 1         | 1         |  |  |

|  |                                                                                                                                                                  |            |            |  |  |
|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|--|--|
|  | AO5. Discuss the need for identifying opportunities for potential business, sources for arranging money and potential legal and financial challenges.            | 2          | 2          |  |  |
|  | AO6. Differentiate between types of customers & Explain the significance of identifying customer needs and addressing them.                                      | 2          | 2          |  |  |
|  | AO7. Create biodata, use various sources to search and apply for jobs & Discuss the significance of dressing up neatly and maintaining hygiene for an interview. | 1          | 1          |  |  |
|  | <b>Sub Total</b>                                                                                                                                                 | <b>10</b>  | <b>10</b>  |  |  |
|  | <b>Grand Total</b>                                                                                                                                               | <b>200</b> | <b>400</b> |  |  |

**Annexure: Assessment Strategy**

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

*Mention the detailed assessment strategy in the provided template.*

**1. Assessment System Overview:**

- Batches are assigned to Training Assessment Wing (TAW), CIPET HO for planning of assessment
- Training Centers request TAW for Assessment and Certification of Trainees
- TAW identifies suitable assessor and nominates the assessor to the respective Training Centre
- TAW monitors the assessment process
- Training Centers maintain necessary records

**2. Testing Environment:**

- Check the Assessment location, date and time
- If the batch size is more than 30, then there should be 02 Assessors in a day (or) 01 assessor in 2 days
- Check that the allotted time to the candidates to complete the Theory & Practical Assessment

**3. Assessment Quality Assurance levels/Framework:**

- Question bank / Question Paper is prepared by the Subject Matter Experts (SME) / Assessor
- Questions are mapped to the specified assessment criteria
- Certified Assessor & Trainer will be engaged in the process

**4. Types of evidence or evidence-gathering protocol:**

- Date / Time recorded for the reporting of the assessor from assessment location
- Assessment batch - Group Photo of Trainees along with Assessor

**5. Method of verification or validation:**

- Surprise visit to the assessment location
- Virtual meet with the Assessor / Trainees

**6. Method for assessment documentation, archiving, and access**

- Hard copies of the documents are stored, soft copies of assessment evidences are stored in Email for future correspondence



**On the Job:**

1. Each module (which covers the job profile of Machine Operator Injection Moulding) will be assessed during the assessment.
2. The candidate must have adequate knowledge in the relevant module of the OJT.
3. Evidences of OJT:
  - Videos of Trainees during the OJT
  - Photographs of Trainees during the OJT
4. Ensure that the candidate is able to:
  - Effective engagement with the customers
  - Understand the working of various tools and equipment

## Annexure: Acronym and Glossary

## Acronym

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

## Glossary

| Term                                         | Description                                                                                                                                                                                                                            |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>National Occupational Standards (NOS)</b> | NOS defines the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.                                              |
| <b>Qualification</b>                         | 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                                                       |
| <b>Qualification File</b>                    | 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. |
| <b>Sector</b>                                | A grouping of professional activities on the basis of their main economic function, product, service or technology.                                                                                                                    |
| <b>Long Term Training</b>                    | Long-term skilling means any vocational training program undertaken for a year and above. <a href="https://ncvet.gov.in/sites/default/files/NCVET.pdf">https://ncvet.gov.in/sites/default/files/NCVET.pdf</a>                          |