

# Model Curriculum

## Machine Operator Assistant – Plastics Extrusion

**SECTOR:** RUBBER  
**SUB-SECTOR:** MANUFACTURING/PLASTICS PROCESSING  
**OCCUPATION:** PLASTICS EXTRUSION  
**REF ID:** RSC/Q4601 (CPC/Q0303), V 1.0  
**NSQF LEVEL:** 3



**CURRICULUM COMPLIANCE TO  
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS**

is hereby issued by the

**RUBBER SKILL DEVELOPMENT COUNCIL**

for the

**MODEL CURRICULUM**

Complying to National Occupational Standards of

Job Role/ Qualification Pack: **'Machine Operator Assistant – Plastics Extrusion'**

QP No. **'RSC/Q4.601 (CPC/Q0303), V1.0, NSQF Level 3'**

Date of Issuance: **December 26<sup>th</sup>, 2016**

Valid up to: **December 25<sup>th</sup>, 2021**

\* Valid up to the next review date of the Qualification Pack



Authorised Signatory  
(Rubber Skill Development Council)

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# Machine Operator Assistant - Plastics Extrusion

## CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Machine Operator Assistant - Plastics Extrusion”, in the “Rubber Skill Development Council” Sector/Industry and aims at building the following key competencies amongst the learners.

<b>Program Name</b>	<b>Machine Operator Assistant – Plastics Extrusion</b>		
<b>Qualification Pack Name &amp; Reference ID</b>	RSC/Q4601 (CPC/Q0303), V 1.0		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	29/05/2019
<b>Pre-requisites to Training</b>	VIII Standard		
<b>Training Outcomes</b>	<p><b>After completing this programme, participants will be able to:</b></p> <ul style="list-style-type: none"> <li>• Explain the basic concepts of plastics</li> <li>• Explain the process requirements for plastics</li> <li>• Analyze the role and responsibilities of a machine operator assistant - plastics extrusion</li> <li>• Identify the plastics raw materials, additives, master batches, and pigments</li> <li>• Analyse the basic concept of extrusion and the process</li> <li>• Identify the chemicals, additives and colorants used in plastic extrusion</li> <li>• Demonstrate the skills to undertake mixing and grinding procedure</li> <li>• Explain the scrap grinders and agglomerates</li> <li>• Demonstrate the HDPE /PVC pipe extruder and film extruder machine operation</li> <li>• Demonstrate the basic skills to perform material loading and handling</li> <li>• Practice reporting and documentation</li> <li>• Demonstrate quality checks and reporting</li> <li>• Ensure sorting, stream lining, storage and documentation, cleaning, standardization and sustenance across the plant premises</li> <li>• Maintain basic health and safety practices at the workplace.</li> </ul>		

This course encompasses 6 out of 6 National Occupational Standards (NOS) of “Machine Operator Assistant- Plastics Extrusion” Qualification Pack issued by “Rubber Skill Development Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1.	<b>Introduction to the job role</b>  <b>Theory Duration</b> (hh:mm) 15:00 <b>Practical Duration</b> (hh:mm) 10:00  <b>Corresponding NOS Code</b> Bridge Module	<ul style="list-style-type: none"> <li>• Explain the developmental history of plastic</li> <li>• Describe current industrial scenario of plastics and prospects</li> <li>• Identify types of plastic</li> <li>• List major industrial associations related to plastics extrusion</li> <li>• Identify equipment used for plastics extrusion</li> <li>• Describe roles and responsibilities for a machine operator assistant - plastics extrusion</li> </ul>	<ul style="list-style-type: none"> <li>• LCD projector, white board with marker and duster, charts etc.</li> <li>• Pen drives, computers etc. for conducting class.</li> </ul>
2.	<b>Plastics raw materials, additives, master batches, and pigments</b>  <b>Theory Duration</b> (hh:mm) 10:00 <b>Practical Duration</b> (hh:mm) 15:00  <b>Corresponding NOS Code</b> RSC/N4601 (CPC/N0311)	<ul style="list-style-type: none"> <li>• Identify the types of plastics used in extrusion and its properties</li> <li>• Check the types of additives, master batches and pigments prior to the extrusion process</li> <li>• Monitor storage and handling of raw materials</li> <li>• Identify the safety equipment and its use</li> <li>• Analyze the do's and don'ts in the area of operation</li> <li>• Examine the safety precaution before operations</li> </ul>	<ul style="list-style-type: none"> <li>• Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>• Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> <li>• Basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding,</li> <li>• Pre drying system like oven drier, hopper drier, dehumidifier, chillers etc.</li> </ul>
3.	<b>Basic concept and process of extrusion</b>  <b>Theory Duration</b> (hh:mm) 10:00	<ul style="list-style-type: none"> <li>• Evaluate the types of extruders used in the extrusion process and their parts</li> <li>• Monitor storage and handling of finished products</li> <li>• Identify the types of mixing and compounding</li> </ul>	<ul style="list-style-type: none"> <li>• LCD projector, white board with marker and duster, charts etc.</li> <li>• Pen drives, computers etc. for conduct of class.</li> <li>• Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Practical Duration</b> (hh:mm) 20:00  <b>Corresponding NOS Code</b> RSC/N4601 (CPC/N0311)	<ul style="list-style-type: none"> <li>Ensure correct measurement of additives, pigments and materials</li> <li>Demonstrate the operation of scrap grinding machines, blenders and agglomerate.</li> </ul>	<ul style="list-style-type: none"> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of low grade from good/reputed supplier.</li> </ul>
4.	<b>Evaluate chemicals, additives and colorants</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 25:00  <b>Corresponding NOS Code</b> RSC/N4602 (CPC/N0313)	<ul style="list-style-type: none"> <li>Describe the types of chemicals, additives and colorants required for plastic extrusion</li> <li>Compute the formulation for different products</li> <li>Practice weighing and batch size</li> <li>Examine the safety equipment for handling chemicals</li> <li>Analyze the do's and don'ts in the area of operation.</li> </ul>	<ul style="list-style-type: none"> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of low grade from good/reputed supplier.</li> <li>Basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding.</li> </ul>
5.	<b>Mixing and grinding procedure</b>  <b>Theory Duration</b> (hh:mm) 15:00  <b>Practical Duration</b> (hh:mm) 30:00  <b>Corresponding NOS Code</b> RSC/N4602 (CPC/N0313)	<ul style="list-style-type: none"> <li>Identify the types of blenders, mixers and their parts</li> <li>Evaluate batches as per the formulations</li> <li>Demonstrate the method of loading and unloading the batches</li> <li>Ensure correct temperature, pressure and speed involved in blenders and mixers</li> <li>Examine the importance of each and every parameter associated to mixing and grinding</li> <li>Identify the precaution to be taken care during the batch preparation</li> <li>Demonstrate how to store batches after preparation.</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Pen drives, computers etc. for conduct of class.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of low grade from good/reputed supplier.</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
6.	<b>Scrap grinders &amp; agglomerators</b>  <b>Theory Duration</b> (hh:mm) 10:00 <b>Practical Duration</b> (hh:mm) 25:00  <b>Corresponding NOS Code</b> RSC/N4602 (CPC/N0313)	<ul style="list-style-type: none"> <li>Identify the types of scrap grinders and agglomerate and their parts</li> <li>Describe the functions of different grinders and agglomerates</li> <li>Operate the machines and perform trouble shooting</li> <li>Ensure storing, housekeeping, and safety while operating machines.</li> </ul>	<ul style="list-style-type: none"> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> <li>Basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding.</li> </ul>
7.	<b>HDPE /PVC pipe extruder &amp; film extruder operation</b>  <b>Theory Duration</b> (hh:mm) 20:00 <b>Practical Duration</b> (hh:mm) 35:00  <b>Corresponding NOS Code</b> RSC/N4603 (CPC/N0314)	<ul style="list-style-type: none"> <li>Identify the types of HDPE / PVC extruders</li> <li>Identify the various parts and functions of extruders</li> <li>Identify the types of film extruders, their parts and the usages</li> <li>Demonstrate the startup and shutting down process</li> <li>Elaborate with a flow chart, the procedure for startup and shutting down</li> <li>Demonstrate threading (initial take up) of pipes and films.</li> </ul>	<ul style="list-style-type: none"> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> <li>Basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding,</li> </ul>
8.	<b>Material loading &amp; handling</b>  <b>Theory Duration</b> (hh:mm) 20:00 <b>Practical Duration</b> (hh:mm) 35:00	<ul style="list-style-type: none"> <li>Ensure proper material loading and handling</li> <li>Demonstrate how to handle the stacking of finished products</li> <li>Check post production operation</li> <li>Demonstrate the safety precaution to be taken during assembling and disassembling</li> <li>Apply safety equipment properly</li> <li>Identify the do's and don'ts in area of operation</li> <li>Evaluate the safety precaution during operations.</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Corresponding NOS Code</b> RSC/N4603 (CPC/N0314)		<ul style="list-style-type: none"> <li>Basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding,</li> <li>Pre drying system like oven drier, hopper drier, dehumidifier, chillers etc.</li> </ul>
9.	<b>Reporting &amp; documentation</b>  <b>Theory Duration</b> (hh:mm) 25:00  <b>Practical Duration</b> (hh:mm) 30:00  <b>Corresponding NOS Code</b> RSC/N4604 (CPC/N0315)	<ul style="list-style-type: none"> <li>Demonstrate the process to generate report data/problems/incidents as per procedure</li> <li>Identify the appropriate authority for reporting</li> <li>Practice documentation that needs to be completed for the job profile</li> <li>Compute and furnish details accurately in an appropriate format</li> <li>Discuss how to complete all documentation within stipulated time</li> <li>Ensure documents are available to all appropriate authorities to inspect</li> <li>Analyze and process requests for information in an appropriate manner</li> <li>Inform the appropriate authority of requests for information received.</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> </ul>
10.	<b>Conduct quality checks</b>  <b>Theory Duration</b> (hh:mm) 15:00  <b>Practical Duration</b> (hh:mm) 25:00	<ul style="list-style-type: none"> <li>Ensure that total range of checks are as per the prescribed national and international standards at regular intervals</li> <li>Apply appropriate measuring instruments, equipment, tools, accessories etc. as prescribed / required</li> <li>Identify non-conformities to quality assurance standards and their causes</li> <li>Identify impact on final product due to non-conformance to prescribed standards</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier.</li> <li>Basics machines for training like hand blow</li> </ul>



Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Corresponding NOS Code</b> RSC/N4605 (CPC/N0316)	<ul style="list-style-type: none"> <li>Ensure that the problems do not reoccur by taking necessary action</li> <li>Discuss effectiveness of the corrective action taken</li> </ul>	moulding, semiautomatic blow moulding, automatic blow moulding, <ul style="list-style-type: none"> <li>Pre drying system like oven drier, hopper drier, dehumidifier, chillers etc.</li> </ul>
11.	<b>Analyze quality check results</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 15:00  <b>Corresponding NOS Code</b> RSC/N4605 (CPC/N0316)	<ul style="list-style-type: none"> <li>Interpret the results of the quality check correctly</li> <li>Inform and discuss the results of the findings with QC in charge/appropriate authority</li> <li>Evaluate the results of the findings within stipulated time</li> <li>Examine the results of action taken</li> <li>Determine the adjustments not covered by the established procedures, for future reference</li> <li>Analyze effectiveness of the action taken</li> <li>Escalate issues where the cause of the defect cannot be identified.</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> </ul>
12.	<b>Ensure sorting, stream lining, storage and and sustenance across the plant</b>  <b>Theory Duration</b> (hh:mm) 10:00  <b>Practical Duration</b> (hh:mm) 20:00  <b>Corresponding NOS Code</b> RSC/N4101 (CPC/N0411)	<ul style="list-style-type: none"> <li>Demonstrate the sorting process of the tools, fixtures and jigs that are lying on workstations.</li> <li>Check that the tools in use are not cluttering the workbenches or work surfaces.</li> <li>Segregate the waste in hazardous/non-hazardous types as per the sorting instructions</li> <li>Demonstrate the technique of waste disposal and waste storage in the proper bins</li> <li>Evaluate the importance of segregating the items which are labelled as red tag items for the process area and keep them in the correct places</li> <li>Demonstrate sorting tools/equipment/fasteners/spare parts as per specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</li> </ul>	<ul style="list-style-type: none"> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc.</li> <li>Plastics raw material like pp, hdpe, pet, pbt, pvc etc. for training on machines of blow grade from good/reputed supplier</li> <li>basics machines for training like hand blow moulding, semiautomatic blow moulding, automatic blow moulding</li> <li>Pre drying system like oven drier, hopper drier, dehumidifier, chillers, injection stretch blow moulding machine, automatic double stage blow moulding machine etc.</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Practice stacking the various types of boxes and containers properly as per the size/utility to avoid any spillage of items/breakage and also enable easy sorting when required</li> <li>Assemble extra material and tools at the designated sections and make sure that no additional material/tool is lying near the work area</li> <li>Identify the floor markings/area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards</li> <li>Comply with the given instructions and check for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</li> </ul>	
13.	<p><b>Maintain basic health and safety practices at the workplace</b></p> <p><b>Theory Duration</b> (hh:mm) 10:00</p> <p><b>Practical Duration</b> (hh:mm) 15:00</p> <p><b>Corresponding NOS Code</b> RSC/N4101 (CPC/N0411)</p>	<ul style="list-style-type: none"> <li>Recognize the importance of wearing protective clothing/equipment for specific tasks and work conditions</li> <li>Demonstrate safe working practices while dealing with hazards</li> <li>Demonstrate good housekeeping practices at all times</li> <li>Apply appropriate fire extinguishers on different types of fires</li> <li>Demonstrate rescue techniques applied during fire hazard</li> <li>Identify potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise</li> <li>Conduct regular checks with support of the maintenance team on machine health to identify potential hazards</li> </ul>	<ul style="list-style-type: none"> <li>LCD projector, white board with marker and duster, charts etc.</li> <li>Pen drives, computers etc. for conduct of class.</li> <li>Common hand tools like vernier calliper, micrometer, drills, tapes and dies etc</li> </ul>

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		<ul style="list-style-type: none"> <li>Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc.</li> <li>Inform the concerned authorities about machine breakdowns, and damages</li> <li>Create awareness amongst others by sharing information on the identified risks.</li> </ul>	
	<b>Total Duration</b>  <b>Theory Duration</b> <b>180:00</b>  <b>Practical Duration</b> <b>300:00</b>	<b>Unique Equipment Required:</b> <ol style="list-style-type: none"> <li><b>Class Room equipment:</b> LCD projector/screen, computer, charts, black / white board and duster.</li> <li><b>Measuring equipment:</b> Steel ruler, micrometer, vernier caliper, radius gauge, feeler gage, steel measuring tape, weighing balance (1 no.)</li> <li><b>Hand Tools:</b> Hammer, screw driver set with multiple heads,</li> <li>Allen key hexagonal, file triangular, hacksaw, adjustable, spanner set double side, adjustable spanner</li> <li><b>Personal Protective equipment:</b> Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines</li> <li><b>Plastics raw material:</b> PP, hdpe, blow moulding grade.</li> <li>mould: hand mould, blow mould</li> <li><b>Auxiliaries equipment:</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, hand operated blow moulding m/c with accessories, semi-automatic blow moulding machine, full automatic double stage blow moulding machine, injection stretch blow moulding machine.</li> </ol>	

Grand Total Course Duration: **480 Hours 0 Minutes**

(This syllabus/ curriculum has been approved by [Rubber Skill Development Council](#))

## Trainer Prerequisites for Job role: “Machine Operator Assistant - Plastics Extrusion” mapped to Qualification Pack: “RSC/Q4601 (CPC/Q0303)” Version 1.0

Sr. No.	Area	Details
1	<b>Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ <u>RSC/Q4601 (CPC/Q0303), V 1.0</u> ”.
2	<b>Personal Attributes</b>	A Trainer should be free from socio-economic preferences and prejudice. He/ she should be safety conscious and proficient in handling and use security/ safety equipment. Besides being knowledgeable, he/ she should be energetic, motivating, innovative and good at communication. The trainer should be able to establish rapport with the trainees and employ innovative methods to impart instructions.
3	<b>Minimum Educational Qualification</b>	VIII <sup>th</sup> Standard
4a	<b>Domain Certification</b>	Certified for Job Role “ <u>Machine Operator Assistant - Plastics Extrusion</u> ” mapped to the Qualification Pack “ <u>RSC/Q4601 (CPC/Q0303), V 1.0</u> ” issued by RSDC. Minimum accepted score as per SSC guidelines is 80%.
4b	<b>Platform Certification</b>	Recommended that the Trainer is certified for the Job Role: “ <u>Trainer</u> ”, mapped to the Qualification Pack: “ <u>MEP/Q2601</u> ” with scoring of minimum 80%.
5	<b>Experience</b>	As per the standards set by relevant SSC to practice in different industry sectors.

## Annexure: Assessment Criteria

### CRITERIA FOR ASSESSMENT OF TRAINEES

**Job Role: Machine Operator Assistant - Plastics Extrusion**  
**Qualification Pack Code: RSC/Q4601 (CPC/Q0303), V 1.0**  
**Sector Skill Council: Rubber Skill Development Council**

#### Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also laydown proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.
6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
<b>RSC/N4601 (CPC/N0311): Basics Plastics Raw Materials, Additives, Master batches, pigments &amp; Extrusion Concept</b>	PC1. Understanding Types of Plastics used in Extrusion and Its Properties	8.5	2.5	6
	PC2. Types of Additives , Master batches and Pigments	8.5	2.5	6
	PC3. Storing and Handling of Raw Materials and House Keeping	8.5	2.5	6
	PC4. Types of Extruders Used in the Extrusion Process and their Parts	8.5	2.5	6
	PC5. Storing and Handling of Finished Products and House Keeping	8.5	2.5	6
	PC6. Types of Mixing and Compounding	8.5	2.5	6
	PC7. Measurement of Additives, Pigments and Materials	8	2	6
	PC8. Study and Operation of Scrap Grinding Machines , Blenders & Agglomerator	8	2	6
	PC9. Understanding Safety Equipment's and Its Use	8	2	6
	PC10. Do's and Don'ts in Area of Operation	6	2	4
	PC11. Safety Precaution Majors before Operations	6	2	4
<b>Subtotal</b>		<b>87</b>	<b>25</b>	<b>62</b>
<b>RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S</b>	PC1. Wear protective clothing/equipment for specific tasks and work conditions	2.5	0.5	2
	PC2. Carry out safe working practices while dealing with hazards to ensure the safety of self and others.	2.5	0.5	2
	PC3. Apply good housekeeping practices at all times	2.5	0.5	2
	PC4. Use the various appropriate fire extinguishers on different types of fires correctly	2.5	0.5	2
	PC5. Demonstrate rescue techniques applied during fire hazard, demonstrate good housekeeping in order to prevent fire hazards, demonstrate the correct use of a fire extinguisher.	2.5	0.5	2
	PC6. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise, and Identify areas in the	2.5	0.5	2

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	plant which are potentially hazardous/unhygienic in nature. Conduct regular checks with support of the maintenance team on machine health to identify potential hazards due to wear and tear of machine.			
	PC7. Inform the concerned authorities on the potential risks identified in the processes, workplace area/ layout, materials used etc., Inform the concerned authorities about machine breakdowns, damages which can potentially harm man/ machine during operations.	2.5	0.5	2
	PC8. Create awareness amongst other by sharing information on the identified risks.	2.5	0.5	2
	PC9. Follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches or work surfaces.	2.5	0.5	2
	PC10. Ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions	2.5	0.5	2
	PC11. Follow the technique of waste disposal and waste storage in the proper bins as per SOP	1.5	0.5	1
	PC12. Segregate the items which are labeled as red tag items for the process area and keep them in the correct places	1.5	0.5	1
	PC13. Sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions	1.5	0.5	1
	PC14. Ensure that areas of material storage areas are not overflowing PC15. Properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required	1.5	0.5	1

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	PC16. Return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area	1.5	0.5	1
	PC17. Follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards.	1.5	0.5	1
	PC18. Follow the proper labelling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists	1.5	0.5	1
	PC19. Check that the items in the respective areas have been identified as broken or damaged	1.5	0.5	1
	PC20. Follow the given instructions and check for levelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same To avoid spillage, leakage, fire etc.	1.5	0.5	1
	PC21. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions.	1.5	0.5	1
	<b>Subtotal</b>	<b>40</b>	<b>10</b>	<b>30</b>
<b>RSC/N4602 (CPC/N0313) Plastics Compounding / Mixing, Scrap, Grinding, Agglomerating</b>	PC1. Understanding Types of Chemicals, Additives and Colorants	5	1	4
	PC2. Formulation laid down for different Products	5	1	4
	PC3. Weighing and Batch Size	5	1	4
	PC4. Types of Blenders , Mixers and their Parts	5	1	4
	PC5. Preparation Batches as per the formulations	5	1	4
	PC6. Loading and unloading of Batches	5	1	4
	PC7. Temperature, Pressure and Speed involved in Blenders and Mixers	6	2	4



Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	PC8. Importance of each and every Parameters	8	1	7
	PC9. Precaution to be taken care during the batch preparation	8	1	7
	PC10. Storing of batches after preparation	8	1	7
	PC11. Types of Scrap Grinders and Agglomerator and their parts	8	1	7
	PC12. Operation & Trouble Shooting	7.5	0.5	7
	PC13. Storing, House Keeping, Safety while operation	5.5	0.5	5
	PC14. Understanding Safety Equipment's and Its Use	4.5	0.5	4
	PC15. Do's and Don'ts in Area of Operation	4.5	0.5	4
	PC16. Safety Precaution Majors before Operations	5	1	4
	<b>Subtotal</b>	<b>95</b>	<b>15</b>	<b>80</b>
<b>RSC/N4603 (CPC/N 0314): HDPE /PVC Pipe Extruder &amp; Film Extruder Machine Operation</b>	PC1. Types of HDPE / PVC Extruders & their Parts	3	1	2
	PC2. Types of Film Extruders & their Parts	5	1	4
	PC3. Starting up & Shutting down Process	5	1	4
	PC4. Threading (Initial Take up) of Pipes & Films	5	1	4
	PC5. Safety Precaution taken during assembling and disassembling	6	2	4
	PC6. Material Loading and Handling	6	2	4
	PC7. Finished Products Segregation & Stacking	6	2	4
	PC8. Post Production Operation	6	2	4
	PC9. Understanding Safety Equipment's and Its Use	5	1	4
	PC10. Do's and Don'ts in Area of Operation	5	1	4
	PC11. Safety Precaution Majors before Operations	3	1	2
	<b>Subtotal</b>	<b>55</b>	<b>15</b>	<b>40</b>
<b>RSC/N4604 (CPC/N0315) Reporting &amp;</b>	PC1. Report data/problems/incidents as per the laid down procedure in the prescribed format and registers	6	2	4

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
<b>Documentation</b>	PC2. Report to the appropriate authority as laid down by the company procedure	6	2	4
	PC3. Identify documentation to be completed relating to the job profile	8	2	6
	PC4. Record details accurately in an appropriate format	10	4	6
	PC5. Complete all documentation within stipulated time according to company procedure	10	4	6
	PC6. Make sure documents are available to all appropriate authorities to inspect	8	2	6
	PC7. Respond to requests for information in an appropriate manner whilst following organizational procedures	8	2	6
	PC8. Inform the appropriate authority of requests for information received	8	2	6
	<b>Subtotal</b>	<b>64</b>	<b>20</b>	<b>44</b>
<b>RSC/N4605 (CPC/N0316) To Carry Out Quality Checks</b>	PC1. Ensure that total range of checks as per the prescribed national and International standards on regular intervals throughout the shifts	3	1	2
	PC2. Use appropriate measuring instruments, equipment, tools, accessories etc., as prescribed / required	3	1	2
	PC3. Identify non-conformities to quality assurance standards	3	1	2
	PC4. Identify potential causes of non-conformities to quality assurance standards	5	1	4
	PC5. Identify impact on final product due to non-conformance to prescribed Standards	5	1	4
	PC6. Evaluating the need for action to ensure that problems do not reoccur	5	1	4
	PC7. Suggest corrective action to address problem	5	1	4
	PC8. Review effectiveness of corrective action	5	1	4
	PC9. Interpret the results of the quality check correctly	5	1	4
	PC10. Take up results of the findings with QC in charge/appropriate authority	5	1	4

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	PC11. Take up the results of the findings within stipulated time	3	1	2
	PC12. Record of results of action taken	3	1	2
	PC13. Record adjustments not covered by established procedures for future reference	3	1	2
	PC14. Review effectiveness of action taken	3	1	2
	PC15. Follow reporting procedures where the cause of defect cannot be identified	3	1	2
	<b>Subtotal</b>	<b>59</b>	<b>15</b>	<b>44</b>
	<b>Total</b>	<b>400</b>	<b>100</b>	<b>300</b>