Model Curriculum

Machine Operator Assistant –

Plastics Processing

SECTOR: RUBBER
SUB-SECTOR: MANUFACTURING/PLASTICS PROCESSING
OCCUPATION: PLASTICS PROCESSING
REF ID: RSC/Q4801 (CPC/Q0103), V 1.0
NSQF LEVEL: 3

Skill India
कौशल भारत-कुशल भारत

RSDC
RUBBER SKILL DEVELOPMENT COUNCIL

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National
Skill Development
Corporation

Certificate

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 Processing'**
QP No. **'RSC/Q4801 (CPC/Q0103), V1.0, NSQF Level 3'**

Date of Issuance: **December 26th, 2016**
Valid up to: **December 25th, 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 Processing

CURRICULUM / SYLLABUS

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

Program Name	**Machine Operator Assistant - Plastics Processing**		
Qualification Pack Name & Reference ID	RSC/Q4801 (CPC/Q0103), V 1.0		
Version No.	1.0	**Version Update Date**	29/05/2019
Pre-requisites to Training	VIII Standard		
Training Outcomes	**After completing this programme, participants will be able to:** • Evaluate the basic concepts of plastics • Explain the process requirements for plastics • Analyze the role and responsibilities of a machine operator assistant - plastics processing • Recognise the different types of plastic material • Practise various techniques in plastics processing • Demonstrate process of moulding operations • Demonstrate process of pre-extrusion operations • Demonstrate process of extrusion operations • Assist the operator with the machines used for injection moulding machine, extrusion, blow moulding etc. • Interact with other departments to escalate queries • Maintain basic health and safety practices at the workplace		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of "Machine Operator Assistant - Plastics Processing" Qualification Pack issued by "Rubber Skill Development Council".

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1.	**Introduction to the job role** **Theory Duration** (hh:mm) 10:00 **Practical Duration** (hh:mm) 10:00 **Corresponding NOS Code** Bridge Module	• Describe the developmental history of plastic • Describe current industrial scenario of plastics and prospects • Identify types of plastic • List major industrial associations related to plastics processing • Identify equipment used for plastics processing • Identify the roles and responsibilities of a machine operator- plastics processing	• LCD Projector, White Board with marker and duster, charts etc • Pen drives, computers etc for conducting class.
2.	**Basic concepts, job requirements and related processes** **Theory Duration** (hh:mm) 22:00 **Practical Duration** (hh:mm) 40:00 **Corresponding NOS Code** RSC/N4801 (CPC/N0109)	• Evaluate the work order (work output) required with the support of supervisor • Examine all the components/processes related documents to understand dimensions and properties of the required output • Comply with the process requirements in terms of temperature of the heater, hydraulic pressure/air pressure/vacuum pressure, rotating speed of the screw pressure, injection time, refilling time, blowing time etc. as mentioned in the work instruction/SOP/control diagrams • Comply with dos and don'ts of the manufacturing process as defined in SOPs/ work instructions • Apply the conversion procedure and process to be adopted for completing the work order provided by the supervisor • Identify the various parameters like temperature of the heaters, hydraulic pressure/air pressure/vacuum pressure, rotating speed of the screw, screw	• Pen drives, computers etc. for conduct of class. • Common hand tools like Vernier calliper, micrometer, drills, tapes and dies etc. • Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, semiautomatic blow molding, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers etc.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		pressure, regulating current, flow of coolant/water etc., before starting the process • Identify the raw material like plastics granules, bonding additives etc. required for executing the activity • Assemble the required material before starting the process • Assess the type of mould/dye required for executing the required conversion operation and ensure that the same is available for moulding operations • Assemble spare parts for continuous operation of the machine • Ensure that mould/dye is cleaned properly and no foreign material is entrapped in the parts of the mould/dye • Ensure the cleaning of other moulding machine tools, auxiliaries • Demonstrate the process for cleaning oil, grease, water etc. from the area around the machine	
3.	**Escalation of queries and interaction with other departments** **Theory Duration** (hh:mm) 10:00 **Practical Duration** (hh:mm) 15:00 **Corresponding NOS Code** RSC/N4801 (CPC/N0109)	• Recognise the need for consulting with superiors in case of any doubt/clarification • Complete the task post the queries are resolved • Plan and report to superiors on completion of the task • Demonstrate good interpersonal relations with superiors and co-workers • Demonstrate disciplined behaviour at the workplace • Practice coordination with other departments to gain their support	• Pen drives, computers etc. for conduct of class. • Common hand tools like Vernier calliper, micrometer, drills, tapes and dies etc.
4.	**Knowledge about different plastic**	• Identify the types of raw material being used in the industry	• Common hand tools like Vernier calliper,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	material **Theory Duration** (hh:mm) 22:00 **Practical Duration** (hh:mm) 40:00 **Corresponding NOS Code** RSC/N4802 (CPC/N0110)	• Analyse the work order required for the process, with the support of the supervisor • Examine the material mentioned in the workorder to understand properties of the required work output • Comply with the process required for the plastics material, in terms of temperature of the heater, rotating speed of the screw, pressure, injection as mentioned in the work instruction/SOP/ control diagrams • Identify the temperature required for melting, processing, etc. for plastic raw material • Identify the processing characteristics of the plastics material in use, for conversion procedure • Demonstrate the process to be adopted for completing the work order from the supervisor by referring to the work instruction document/SOP manual • Ensure that the required material is available before starting the process • Ensure that the plastics material is blended with requisite additives • Check that machine/mould/dye are cleaned properly and no foreign particle is entrapped.	micrometer, drills, tapes and dies etc. • Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, semiautomatic blow molding, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers etc.
5.	**Pre molding operation** **Theory Duration** (hh:mm) 22:00 **Practical Duration** (hh:mm) 35:00 **Corresponding NOS Code**	• Plan the work schedule in consultation with the supervisor • Comply with the data sheet, manual, work instructions before operations • Check the power supply, hydraulic oil level, water connections before starting the process • Ensure availability of the tools, materials and ancillary equipment for the work • Setup the equipment and machineries as per the requirement of job	• Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, semiautomatic blow molding, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	RSC/N4803 (CPC/N0111)	• Plan for the availability and readiness of ancillary equipment like chiller, mould temperature controller, hopper loader, cooling towers etc. • Ensure the disposal of the waste as per the SOP of the organisation • Comply with the legal requirements, organizational policies.	Chillers etc.
6.	**Molding operation** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 35:00 **Corresponding NOS Code** RSC/N4803 (CPC/N0111)	• Ensure that the mould is ready and does not have any problem before the dry run • Ensure that material is available for production and arrange for pre drying, if required • Practice loading the material and pigment (if required) on the hopper • Examine and set the parameters of the machine i.e. temperature, pressure, speed etc. • Inspect the temperature on the barrel to set the correct temperature • Setup the machine and conduct a trial run to get a sample piece • Conduct a visual check of final product in consultation with the operator	• Common hand tools like Vernier calliper, micrometer, drills, tapes and dies etc. • Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, semiautomatic blow molding, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers, M/C with accessories etc.
7.	**Process requirements for blow molding** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 35:00 **Corresponding NOS Code**	• Identify the process, its types and the operations involved in blow moulding • Assist the operator in the work as per the requirement mentioned in the process, under the observation of the supervisor • Check all the components/process related documents to understand dimensions and properties of the required work output • Comply with the process requirements in terms of tools/mould/dye required, temperature of the heater according to plastics material	• Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, Semi-Automatic Blow Molding Machine, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	RSC/N4803 (CPC/N0111)	being used, • Comply with the process requirements in terms of hydraulic/pneumatic pressure/rotating speed of the screw, parison formation, parison programming, blowing time etc. as mentioned in the work instruction/SOP • Identify the dos and don'ts of the blow moulding process as defined in SOPs/work instructions	Chillers etc.
8.	**Pre-extrusion operation** **Theory Duration** (hh:mm) 18:00 **Practical Duration** (hh:mm) 30:00 **Corresponding NOS Code** RSC/N4803 (CPC/N0111)	• Plan the work schedule in consultation with the operator • Assist the operator to obtain and check the data mentioned in the job card • Manage functions in line with the responsibilities of the job role • Ensure the availability of data sheet, manual and work instructions • Inspect power supply, oil level in gear box and water connections • Setup the equipment and machinery as per the requirement of the job • Plan for minimum rejection and ensure its safe reuse/disposal • Analyse the safety aspects of machine operation • Comply with the legal requirements, organizational policies and procedures	• Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, Semi-Automatic Blow Molding Machine, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers etc.
9.	**Extrusion process** **Theory Duration** (hh:mm) 22:00 **Practical Duration** (hh:mm) 40:00 **Corresponding NOS Code**	• Check the availability of the material for production, compounding/colour blending • Inspect the availability and readiness of ancillary equipment like air compressor, hopper loader, dehumidifier, cooling towers etc. • Practise loading the material on the hopper • Inspect the parameters required for the functioning of the machine i.e. temperatures, speeds etc. • Measure the temperature on the	• Pen drives, computers etc. for conduct of class. • Common hand tools like Vernier calliper, micrometer, drills, tapes and dies etc. • Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	RSC/N4803 (CPC/N0111)	barrel with respect to the set temperature • Conduct a trial run to get the extruded sample • Set parameters to obtain the final product • Conduct a visual check of the final product • Apply corona treatment and printing, if required • Plan and store the final product in the specified area • Schedule the cleaning of the machine and equipment at regular intervals	training like hand blow molding, semiautomatic blow molding, Automatic Single stage Blow Molding machine. • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers, M/C with accessories etc.
10.	**Maintain basic health and safety practices at the workplace** **Theory Duration** (hh:mm) 14:00 **Practical Duration** (hh:mm) 20:00 **Corresponding NOS Code** RSC/N4101 (CPC/N0411)	• Analyse the importance of wearing protective clothing/equipment for specific tasks and work conditions • Demonstrate safe working practices while dealing with hazards to ensure the safety of self and others. • Employ good housekeeping standards at all times • Apply appropriate fire extinguishers for different types of fires • Demonstrate rescue techniques applied during fire hazard • Demonstrate the correct use of a fire extinguisher. • Identify potential injuries through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise • Conduct regular checks with support of the maintenance team on machine health to identify potential hazards • Inform the concerned authorities about machine breakdown and damages which can potentially be hazardous to man/ machine, while carrying out operations • Create awareness amongst others	• Pen drives, computers etc. for conduct of class. • Common hand tools like Vernier calliper, micrometer, drills, tapes and dies etc. • Plastics raw material like PP, HDPE, PET, PBT, PVC etc. for training on machines of Blow grade from good/reputed supplier. • Basics machines for training like hand blow molding, semiautomatic blow molding, Automatic blow molding, • Pre drying system like Oven Drier, Hopper Drier, Dehumidifier, Chillers Automatic Single stage Blow Molding machine, Semi-Automatic Blow Molding Machine, M/C with accessories etc.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		by sharing information on the identified risks • Ensure there is no clutter around the workstation and only the tools, fixtures and jigs that are required should be kept • Categorize waste in hazardous/non-hazardous form as per the instructions • Demonstrate the technique of waste disposal and waste storage in the proper bins as per the SOP • Segregate the items which are labelled as red tag items for the process area and keep them in the correct places • Demonstrate segregating tools/equipment/fasteners/spare parts as per specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions • Ensure the cleanliness around the area where material is stored • Practise stacking the various types of boxes and containers properly as per the size/utility, to avoid any spillage or breaking of items and also enable to easily locate • Assemble extra material and tools to the designated sections and make sure that no additional material/tool is lying near the work area • Ensure proper demarcation of the various sections in the plant through the floor markings/area markings for the same • Identify and follow the proper labelling mechanism of instruments/boxes/containers and maintaining reference files/documents with the codes and the lists • Comply with the given instructions and check for labelling of fluids, oils, lubricants, solvents,	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.	
	Total Duration **Theory Duration 180:00** **Practical Duration 300:00**	**Unique Equipment Required:** **1. Class Room equipment:** LCD Projector/Screen, Computer, charts, Black / White board and duster. **2. Measuring equipment:** Steel Ruler, Micrometer, Vernier Caliper, Radius gauge, Feeler gage, Steel measuring tape, Weighing Balance (1 No.) **3. Hand Tools:** Hammer, screw driver set with Multiple heads, **4.** Allen key hexagonal, File triangular, Hacksaw, adjustable, Spanner set double side, Adjustable spanner **5. Personal Protective equipment:** Safety Goggles, Rubber Gloves, Asbestos gloves, Fire Extinguisher, Apron, Helmet, First Aid Box with Medicines **6. Plastics raw material:** PP, HDPE, Blow molding grade. **7.** Mold: Hand mold, Blow Mold **8. Auxiliaries equipment:** Automatic Hopper Loader, Hot air oven and Dryer, Dehumidifier, Mold Temperature Controller, Scrap Grinder, Crane, Air Compressor, Hot air blow Gun, Water cooling Tower, Hand Operated Blow Molding M/C with accessories, Semi-Automatic Blow Molding Machine, Fully Automatic Single stage Blow Molding machine.	

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 Processing" mapped to Qualification Pack: "RSC/Q4801 (CPC/Q0103)" Version 1.0

Sr. No.	Area	Details
1	**Description**	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack "RSC/Q4801 (CPC/Q0103), V 1.0".
2	**Personal Attributes**	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	**Minimum Educational Qualification**	VIIIth Standard
4a	**Domain Certification**	Certified for Job Role "Machine Operator Assistant - Plastics Processing" mapped to the Qualification Pack "RSC/Q4801 (CPC/Q0103), V 1.0" issued by RSDC
4b	**Platform Certification**	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q2601" with scoring of minimum 80%.
5	**Experience**	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 Processing **Qualification Pack Code: RSC/Q4801 (CPC/Q0103), 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
RSC/N4801 (CPC/N0109): Familiarization with basic concepts, job requirements & basic related process.	PC1. Discuss the work order (work output) required from the process and with the supervisor	6	2	4
	PC2. Refer all components / process related documents to understand dimensions and properties of the required work output	6	2	4
	PC3. Understand the process requirements in terms of temperature of the heater, hydraulic pressure/ air pressure/ vacuum pressure, rotating speed of the screw pressure, injection time, refilling time, blowing time etc. as mentioned in the Work Instruction/ SOP/ Control Diagrams	6	2	4
	PC4. Clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors	6	2	4
	PC5. Understand the conversion procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document/ SOP manual	6	2	4
	PC6. Set the various parameters like temperature of the heaters, hydraulic pressure/air pressure/vacuum pressure, rotating speed of the screw, screw pressure, regulating current, flow of coolant/ water etc. before starting the process as per the parameters are mentioned in the Work Instructions/ SOP manual	6	2	4
	PC7. Understand the raw material like plastics granules, bonding additives etc. required for executing the activity	6	2	4
	PC8. Ensure that the required material is available before starting the process	6	2	4
	PC9. Understand the type of Mold /Die required for executing the required conversion operation and ensure that the same is available for molding operations	6	2	4
	PC10. Ensure the availability of spare parts for continuous operation of machine	6	2	4
	PC11. Ensure that mold / Die are cleaned properly & no foreign material is entrapped in parts of mold/die.	6	2	4

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	PC12. Ensure cleaning of the other molding machine tools, auxiliaries(if any)	6	2	4
	PC13. Ensure cleaning of the area around the machine for any oil, grease, water etc	6	2	4
	PC14. Consult with superiors in case of any doubt/clarification	2	1	1
	PC15. Self-confidence after resolving the queries to complete the task.	2	1	1
	PC16. Report completion of work to superiors	2	0.5	1.5
	PC17. Good interpersonal relations with superiors & fellow operators.	2	0.5	1.5
	PC18. Disciplined behavior in work place	2	0.5	1.5
	PC19. Good coordination with other department person for getting their support for work.	2	0.5	1.5
	Subtotal	**90**	**30**	**60**
RSC/N4802 (CPC/N0110) :Basic Knowledge about different plastic material	PC1. Discuss about the type of raw material being used in the industry & for work Order required for the process and with the supervisor	3	1	2
	PC2. Refer all material related documents to understand properties of the required work output and able to identify the material	8	2	6
	PC3. Understand the process requirements for the Plastics material in terms of temperature of the heater, rotating speed of the Screw, pressure, injection as mentioned in the Work Instruction/ SOP / Control Diagrams	10	2	8
	PC4. Understand the melting temperature, processing temperature etc. for plastic raw material	10	2	8
	PC5. Understand the processing characteristics of the plastics material being used for conversion procedure and process to be adopted for completing the work order from the supervisor by referring the Work Instruction document / SOP manual	10	2	8
	PC6. Ensure that the required material is available before starting the process	10	2	8
	PC7. Ensure that the plastics material is blended with requisite additives	9	1	8
	PC8. Ensure that machine / mold / Die are	9	1	8

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	cleaned properly & no foreign material is entrapped in parts of machine / mold / die.			
	PC9. Ensure cleaning of the materials spilled around the machine	7	1	6
	PC10. Ensure cleaning of the area around the machine for any oil, grease, water etc	4	1	3
	Subtotal	**80**	**15**	**65**
RSC/N4803 (CPC/N0111): Familiarized with various Plastics processing techniques & to assist the Operator in Injection molding machine, Extrusion, Blow Molding etc.	PC1. Assist in Planning work schedule in concurrence with Superior	3	1	2
	PC2. Ensure availability of data sheet, manual, work instructions	6	1	5
	PC3. For power supply, hydraulic oil level, water connections	6	2	4
	PC4. Ensure availability of the tools ,materials & ancillary equipments for the work	6	2	4
	PC5. Setup the equipment & machineries as per the job requirement	6	2	4
	PC6. Understand Planning for Minimum wastage & its safe disposal	6	2	4
	PC7. Work in conformance to legal requirements, organizational policies and procedures	6	2	4
	PC8. Ensure that the mold is ready & having no problem in dry run	6	2	4
	PC9. Check material is available for production. If required arrange for pre drying	6	2	4
	PC10. Check the availibity & readiness of ancillary equipments like chiller, mold Temperature controller, hopper loader, Cooling towers etc	6	2	4
	PC11. Load the material and pigment (if required) in the hopper	6	2	4
	PC12. Observe to Set the parameters of the machine i.e. temperature, pressure, speed etc	6	2	4
	PC13. Check the temperature on the barrel with respect to set temperature	6	1	5
	PC14. Conduct trial run to get sample piece once machine is set with the help of operator	6	1	5
	PC15. Visual check of final product in consultation with operator	6	1	5

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	PC16. Carry out post molding operation during the cycle time run such as. trimming, apply protective tapes, putting labels on each product for identification	6	1	5
	PC17. understand the process, their types, operations involved	6	1	5
	PC18. Assist the operator in the work requirements for the process and with the supervisor	6	1	5
	PC19. Refer all components / process related documents to understand dimensions and properties of the required work output	6	1	5
	PC20. Understand the process requirements in terms of tools / mold / die required, temperature of the heater according to plastics material being used, Hydraulic / pneumatic pressure / rotating speed of the screw, Parison formation, Parison Programming, Blowing time etc. as mentioned in the Work Instruction / SOP / Control Diagrams, Clearly understanding the do's and don'ts of the blow molding process as defined in SOPs / Work Instructions or as defined by supervisors	6	1	5
	PC21. Planning work schedule in concurrence with Operator	6	1	5
	PC22. Assist the operator to Obtain and check the data on the job card and carry out functions in line with the responsibilities of job role	6	1	5
	PC23. Ensure availability of data sheet, manual, work instructions	6	1	5
	PC24. Check for power supply, oil level in gear box, water connections	6	1	5
	PC25. Setup the equipment & machineries as per the job requirement	6	1	5
	PC26. Planning for Minimum rejection & its safe reuse/disposal	6	1	5
	PC27. Safety aspects of machine operation	6	1	5
	PC28. Work in conformance to legal requirements, organizational policies and procedures	6	1	5
	PC29. Check material is available for production. Compounding / Color	3	1	2

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	blending			
	PC30. Check the availibity & readiness of ancillary equipments like air compressor, hopper loader, dehumidifier, Cooling towers etc	2	1	1
	PC31. Load the material in the hopper	2	0.5	1.5
	PC32. Set the parameters of the machine i.e. temperatures, speeds etc.	2	0.5	1.5
	PC33. Check the temperature on the barrel with respect to set temperature	2	0.5	1.5
	PC34. Conduct trial run to get extruded sample once machine is set	2	0.5	1.5
	PC35. Adjust parameters unless getting final product	2	0.5	1.5
	PC36. Visual check of final product	2	0.5	1.5
	PC37. Corona treatment & printing, if required	2	0.5	1.5
	PC38. Store the final product in specified area	2	0.5	1.5
	PC39. Clean the machine & equipments at regular interval	2	0.5	1.5
	PC40. Work in compliance with specified health and safety standards	2	0.5	1.5
	Subtotal	**190**	**45**	**145**
RSC/N4101 (CPC/N0411): Maintain basic health and safety practices at the workplace, 5S	PC1. Use 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 plant which are potentially hazardous/ unhygienic in nature. Conduct regular	2.5	0.5	2

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	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 un- necessary 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 labelled 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	1.5	0.5	1
	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
	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	1.5	0.5	1

Assessable outcome		Marks Allocation		
NOS	Performance Criteria	Total	Theory	Practical
	various sections in the plant as per the prescribed instructions and standards.			
	PC18. 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
	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 labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc. 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
	Subtotal	**40**	**10**	**30**
	Total	**400**	**100**	**300**