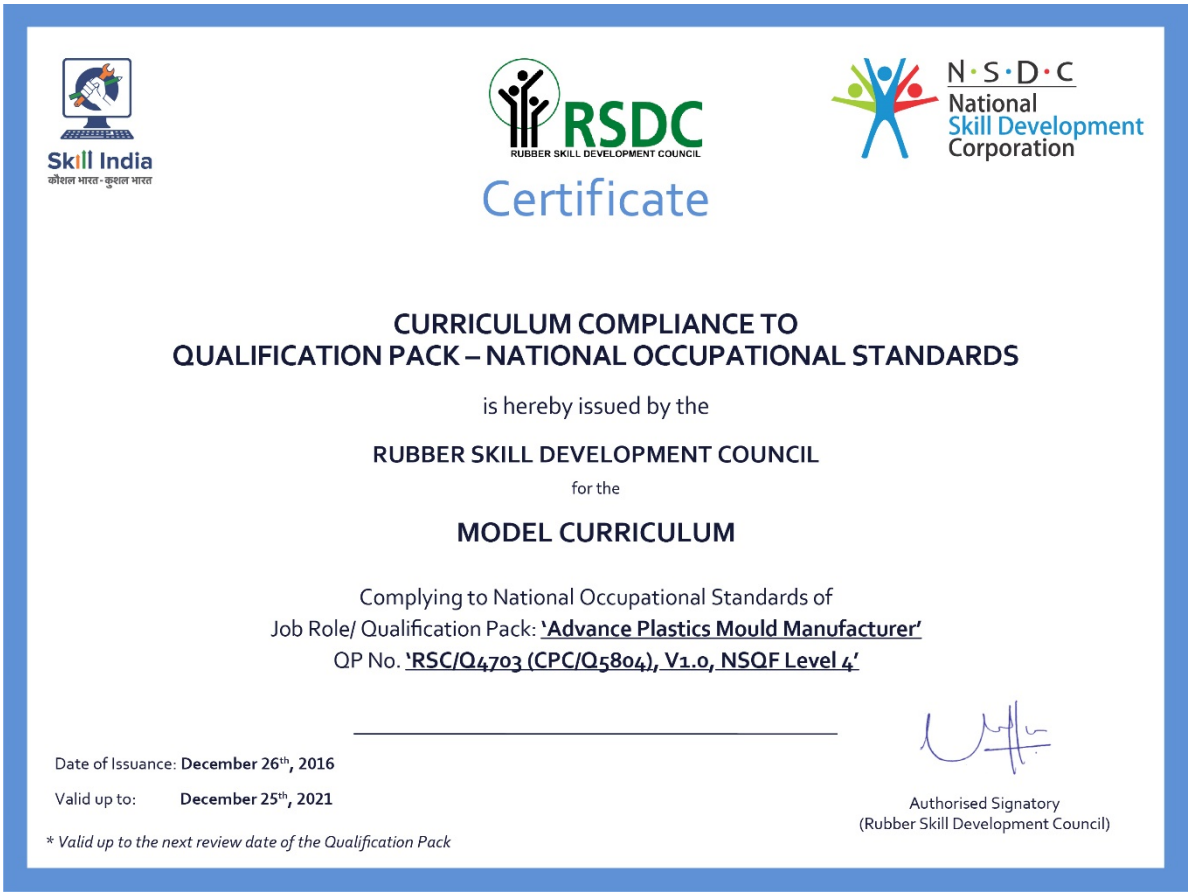
Model Curriculum

Advance Plastics Mould Manufacturer

SECTOR:	**RUBBER**
SUB-SECTOR:	**PLASTICS PROCESSING**
OCCUPATION:	**PLASTICS MOULD MANUFACTURING**
REF ID:	**RSC/Q4703 (CPC/Q5804), V 1.0**
NSQF LEVEL:	**4**



Skill India
कौशल भारत-कुशल भारत

RSDC
RUBBER SKILL DEVELOPMENT COUNCIL

N·S·D·C
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: **'Advance Plastics Mould Manufacturer'**
QP No. **'RSC/Q4703 (CPC/Q5804), V1.0, NSQF Level 4'**

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)

TABLE OF CONTENTS

Advance Plastics Mould Manufacturer

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of an "Advance Plastics Mould Manufacturer", in the "Rubber Skill Development Council" Sector/Industry and aims at building the following key competencies amongst the learners.

Program Name	**Advance Plastics Mould Manufacturer**		
Qualification Pack Name and Reference ID	RSC/Q4703 (CPC/Q5804), V 1.0		
Version No.	1.0	**Version Update Date**	29/05/2019
Pre-requisites to Training	10th Standard		
Training Outcomes	**After completing this programme, participants will be able to:** • Evaluate the basic concepts of plastics • Explain the process requirements for plastics • State the job role and responsibilities of an advanced plastics mould manufacturer • Understand the concepts of engineering drawing • Analyze the job drawing/ blue print and dimensional tolerances • Assist in performing the mould making process • Analyze the types of plastics mould • Demonstrate machine operation skill to manufacture mould parts • Analyze metal cutting and cutting tools • Perform mould polishing and mould assembly • Operate CNC lathe and CNC milling machine • Practise programming of CNC lathe, milling machine • Operate EDM machine • Demonstrate the basic knowledge of computer and data entry in MS office/office open source softwares • Demonstrate effective working with others • Maintain basic health and safety practices at the workplace.		

This course encompasses 10 out of 10 National Occupational Standards (NOS) of "Advance Plastic Mould Manufacturer" 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) 20:00 **Practical Duration** (hh:mm) 10:00 **Corresponding NOS Code** Bridge Module	• State the developmental history of plastic • Describe the current industrial scenario of plastics and prospects • Identify the types of plastic • List major industrial associations in mould manufacturing. • Identify equipment used for plastic moulding • Describe roles and responsibilities for an advanced plastic mould manufacturer.	**Class Room equipment:** LCD projector/screen, computer, charts, black / white board and duster.
2.	**Basic concept, job requirements and knowhow for mould making** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 60:00 **Corresponding NOS Code** RSC/N4701 (CPC/N5802)	• Demonstrate the process of interaction with the head mould maker and follow the mould drawing • Plan the day's mould-making activities based on the drawing • Organize tools and raw materials for production in sufficient quantity • Analyze the drawing, dimension and tolerances of the individual part before making it • Comply with the assembly drawing and detail drawing of mould / mould part • Assemble raw material/tools from the store/tool crib before starting the work • Assemble the tools required for mould making process and ensure that the same is available in shop floor • Ensure the raw material like steel material are available for different mould parts from the drawing	**Measuring equipment:** Steel ruler, micrometer, vernier caliper, radius gauge, feeler gauge, hight gauge, thread gauge, steel measuring tape, weighing balance (1 no.) **Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal,twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives **Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines
3.	**Demonstrate mould making process** **Theory Duration** (hh:mm) 30:00	• Identify the specific hand tools required for mould making process • Demonstrate mould making by using different hand tools • Demonstrate handling of different	**Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal ,twist drills bit, file triangular, hacksaw adjustable,

	Practical Duration (hh:mm) 70:00 **Corresponding NOS Code** RSC/N4702 (CPC/N5803)	measurement instruments • Segregate different tools for particular job during mould operations • Perform steps to handle the vernier caliper, micrometer etc. • Identify job on different types of vices. • Assemble mould using the right tool and polishing tools • Use protective clothing/equipment for specific tasks and work conditions. • Demonstrate safe working practices during work. • Demonstrate good housekeeping practices at all the times. • Use the various appropriate fire extinguishers on different types of fires correctly. • Demonstrate rescue techniques applied during fire hazard. • Identify activities which can cause potential injury. • Perform the escalation to the concerned authorities on the potential risks identified during operations. • Demonstrate segregation of waste as hazardous/ non-hazardous waste. • Use the technique of waste disposal and waste storage in the proper bins as per standard operating procedure (SOP).	spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx
4.	**Categorize the types of mould and its function** **Theory Duration** (hh:mm) 30:00 **Practical Duration** (hh:mm) 70:00 **Corresponding NOS Code** RSC/N4703 (CPC/N5804)	• Analyze the two plate injection mould and three plate injection mould • Evaluate the mould feed system, types of gate • Analyze the different types of cooling system • Evaluate the different ejection system of mould • Demonstrate the working procedures for different types of moulds. • Check of final product visually • Demonstrate the process of storing the final product in specified area. • Perform the cleaning process of the machine and equipment at	**Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx

		regular interval. • Undertake/Apply the preventive maintenance of machines and ancillary equipment. • Demonstrate the coordination with maintenance department for resolving breakdown maintenance in minimum possible time. • Perform the root cause analysis of extrusion defects • Apply the corrective and preventive action identified during root cause analysis. • Create the report of defects in the moulds that do not have the authority to repair	
5.	**Practice on conventional machine operations** **Theory Duration** (hh.mm) 30:00 **Practical Duration** (hh.mm) 50:00 **Corresponding NOS Code** RSC/N4704 (CPC/N5805)	• Demonstrate how to set the work piece and cutting tools • Operate the lathe machine to perform different operation • Practise how to set the work piece and cutting tools • Operate the milling machine to perform different operation • Perform the cleaning of the machines, tools and auxiliaries equipment • Demonstrate the process of problem escalation to superiors • Create report of work completion for superiors • Apply safety and health guidelines	**Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal ,twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives **Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box
6.	**Practice CNC machine operations** **Theory Duration** (hh.mm) 10:00 **Practical Duration** (hh.mm) 40:00 **Corresponding NOS Code** RSC/N4704 (CPC/N5805)	• Evaluate that sufficient stock of the required material is available before starting the process. • Operate the CNC lathe machine • Operate the CNC milling machine to perform different operations • Demonstrate how to grind the mould plates and inserts using surface grinding machine • Operate the cylindrical grinding to perform different operation • Perform grinding on guide pillar and bush • Apply quality system to get better product	**Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx

7.	**Demonstrate mould polishing** **Theory Duration** (hh.mm) 20:00 **Practical Duration** (hh.mm) 60:00 **Corresponding NOS Code** RSC/N4705 (CPC/N5806)	• Demonstrate the steps to polish the core and cavity of the mould • Practise the steps to polish the mating parts of mould • Identify the types of finishes available in mould polishing like stoned, paper finish, etc. • Demonstrate the basic finish required in mould polishing • Evaluate the concept of orange peel finishing.	**Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with Auto-CAD/CAE / Creo / NX
8.	**Demonstrate mould assembly** **Theory Duration** (hh.mm) 20:00 **Practical Duration** (hh.mm) 60:00 **Corresponding NOS Code** RSC/N4705 (CPC/N5806)	• Identify the mould parts • Identify the tools used for mould assembly • Organize the mould independently • Demonstrate proper mechanism to assemble different mould parts • Compare the mould assembly process with the disassembly process • Identify the difference in approach while assembling and disassembling.	**Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx
9.	**Pre-requisites to CNC lathe operations** **Theory Duration** (hh:mm) 30:00 **Practical Duration** (hh:mm) 60:00 **Corresponding NOS Code** RSC/N4706 (CPC/N5808)	• Elaborate the concept of lathe operations • Identify the types of lathe operations • Identify the different cutting tools • Demonstrate how to set the of work piece • Organize the tools and tool offset calculation • Demonstrate how to run the CNC tool path programme	**Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx, cnc machine, mould polishing and assembly kit, computer hardware and auto-cad software.
10.	**Operate and programme CNC Milling machine** **Theory Duration** (hh:mm) 20:00 **Practical Duration**	• Identify the 3 major elements of CNC milling process like cutter, spinning tool, feed rate etc. • Identify the specific materials required for milling process like ceramics, composites, polymers etc. • Categorize CNC horizontal and	**Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx,

	(hh:mm) 60:00 **Corresponding NOS Code** RSC/N4706 (CPC/N5808)	vertical machines • Operate the machine tool • Operate the programme in full sequence • Perform different operations on the machine.	cnc machine, mould polishing and assembly kit, computer hardware and auto-cad software.
11.	**Operate EDM machine** **Theory Duration** (hh:mm) 30:00 **Practical Duration** (hh:mm) 60:00 **Corresponding NOS Code** RSC/N4708 (CPC/N5809)	• Evaluate the operating principle of EDM machine • Identify the types of EDM machines • Identify the equipment required for EDM machine • Demonstrate how to set the of work piece • Organize the tools and tool offset calculation • Demonstrate how to calculate spark gap • Demonstrate how to dial the electrode and job • Operate the programme in full sequence • Perform different operations on mould machine.	**Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal,twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives **Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit.
12.	**Effective working with others** **Theory Duration** (hh:mm) 06:00 **Practical Duration** (hh:mm) 25:00 **Corresponding NOS Code** RSC/N4203 (CPC/N7014)	• Practise appropriate communication etiquette while working • Demonstrate active listening skills while interacting with others • Demonstrate responsible and disciplined behaviours at the workplace • Practise accurate receipt of information and instructions from the supervisor and fellow workers • Demonstrate ways to accurately pass on information to authorized persons • Demonstrate helpful behaviour by assisting others in performing tasks in a positive manner	**Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx **Class Room equipment:** LCD projector/screen, computer, charts, black / white board and duster.

		• Assist others to maximize effectiveness and efficiency in carrying out tasks • Escalate grievances and problems to appropriate authority.	
13.	**Basics of computer and data entry** **Theory Duration** (hh.mm) 08:00 **Practical Duration** (hh.mm) 21:00 **Corresponding NOS Code** RSC/N4504 (CPC/N0219)	• Practise form fill-ups for receiving, processing, or tracking data, into MS office software/office Open • Perform scan operations on source documents in accordance with specific instructions. • Check data entered with source documents, checks for compliance and correct all typographical errors • Manage files of source documents or other information related to data entered • Update database to reflect most current source information • Assist in the filing and storage of security and back up files	**Class Room equipment:** LCD projector/screen, computer, charts, black / white board and duster. **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx, cnc machine, mould polishing and assembly kit, computer hardware and auto-cad software.
14.	**Maintain basic health and safety practices at the workplace** **Theory Duration** (hh:mm) 10:00 **Practical Duration** (hh:mm) 30:00 **Corresponding NOS Code** RSC/N4101 (CPC/N0411)	• Comply with environmental and safety policies of organisation • Identify personal safety , job safety and machine safety procedures • Coordinate with other resources at the workplace to achieve the healthy, safe and secure environment • Identify and correct any hazards like illness, accidents, fires or any other natural calamity safely. • Demonstrate safe working practices while dealing with hazards • Practise good housekeeping standards at all times • Demonstrate the correct use of a fire extinguisher • Demonstrate rescue techniques applied during fire hazard • Identify potential injury 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 • Practise how to create awareness	**Class Room equipment:** LCD projector/screen, computer, charts, black / white board and duster. **Measuring equipment:** Steel ruler, micrometer, vernier caliper, radius gauge, feeler gauge, hight gauge, thread gauge, steel measuring tape, weighing balance (1 no.) **Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives **Personal Protective equipment:** Safety goggles, rubber gloves,

		amongst others by sharing information on the identified risks. • Demonstrate the sorting process for equipment • Check that the tools, fixtures and jigs that are lying on workstations are the ones in use and un-necessary items are not cluttering the workbenches • Categorize the types of wastes and their disposal • Segregate the items which are labelled as red tag items for the process area and keep them in the correct places • Categorize the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers • Practise proper stacking of various types of boxes and containers as per the size/ utility • Identify the floor markings/ area markings used for demarcating the various sections in the plant • Comply with the given instructions for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc. • Organize all material and tools in the designated places as indicated in the 5S instructions	asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / nx
	Total Duration **Theory Duration 284:00** **Practical Duration 676:00**	**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 gauge, height gauge, thread gauge, steel measuring tape, weighing balance (1 no.) 3. **Hand Tools:** Hammer, screw driver set with multiple heads, allen key hexagonal, twist drills bit, file triangular, hacksaw adjustable, spanner set double side, adjustable spanner, crimping tools, calculator, wrenches, pliers, cutters, striking tools, struck or hammered tools, vises, clamps, snips, saws, drills and knives 4. **Personal Protective equipment:** Safety goggles, rubber gloves, asbestos gloves, fire extinguisher, apron, helmet, first aid box with medicines 5. **Model Mould:** Two plate mould, three plate mould, compression mould, blow mould and transfer mould, cnc machine, mould polishing and assembly kit, computer hardware with auto-cad/cae / creo / NX, CNC machine, mould polishing and assembly kit, computer hardware and auto-cad software.	

Grand Total Course Duration: **960 Hours 0 Minutes**

(This syllabus/ curriculum has been approved by ***Rubber Skill Development Council)***

Trainer Prerequisites for Job role: "Advance Plastics Mould Manufacturer" mapped to Qualification Pack: "RSC/Q4703 (CPC/Q5804)" 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/Q4703 (CPC/Q5804), 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**	10th Standard
4a	**Domain Certification**	Certified for Job Role "Advance Plastics Mould Manufacturer" mapped to the Qualification Pack "RSC/Q4703 (CPC/Q5804), V 1.0" issued by RSDC. Minimum accepted score as per SSC guidelines is 80%.
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: Advance Plastic Mould Manufacturer **Qualification Pack Code: RSC/Q4703 (CPC/Q5804), 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/N4101) (CPC/N0411) Maintain basic health and safety practices at the workplace, 5S	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 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.	2.5	0.5	2
	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 and 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 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
	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
	Sub total	**40**	**10**	**30**
(RSC/N4701) (CPC/N5802) To understand basic concepts of Engineering drawing and able to study the Job Drawing/Blue Print and	PC1. To interact with the head mould maker and understand the mould drawing	7.5	2.25	5.25
	PC2. To help in planning the day's Mould making activities based on the Drawing	7.5	2.25	5.25
	PC3. To ensure availability of Tools and Raw materials for production in sufficient quantity as per production plan/operators instructions.	5	1.5	3.5
	PC4. Clearly understand the Drawing, Dimension and Tolerances of the individual part before making it.	5	1.5	3.5

Dimensional Tolerances job	PC5. Understand the Assembly Drawing and Detail Drawing of Mould / Mould Parts.	5	1.5	3.5
	PC6. Ensure that the required raw material/Tools is procured from the store/Tool Crib before starting the work	5	1.5	3.5
	PC7. Understand the Tools required to execute the required Mould Making Process and ensure that the same is available in shop floor	5	1.5	3.5
	PC8. If tool is not available collect the tools from tool crib.	5	1.5	3.5
	PC9. Understand the raw material like steel material for different mould parts from the drawing	5	1.5	3.5
	Sub total	**50**	**15**	**35**
(RSC/N4702) (CPC/N5803) Assist in performing the Mould making Process by use of different types of Hand tools	PC1. Perform Handling and Using of Different Hand tools	10	3	7
	PC2. Hands on Skill and Accruing Practices on measurement of Mould Parts	10	3	7
	PC3. Select Different tools for particular job	10	3	7
	PC4. Perform to handle the vernier Caliper, Micrometer etc.	10	3	7
	PC5. Can able to set job on different types of vices.	10	3	7
	Sub total	**50**	**15**	**35**
(RSC/N4703) (CPC/N5804) Study of Types of Plastics Mould	PC1. Study of Two Plate Injection Mould and Three Plate Injection Mould	20	6	14
	PC2. Study of Mould Feed System, Types of Gate	10	3	7
	PC3.Study of Different types of cooling System	10	3	7
	PC4.Study of Different ejection system of Mould.	10	3	7
	Sub total	**50**	**15**	**35**
(RSC/N4704) (CPC/N5805) Machining Practice on Conventional and CNC Machines	PC1. To Set the work piece and Set the cutting Tools	10	2	8
	PC2. To Operate the Lathe Machine and to perform different operation	10	2	8
	PC3. To Operate CNC Lathe	10	2	8
	PC4. To Set the work piece and Set the cutting Tools	10	2	8
	PC5. To Operate the Milling Machine and to perform different operation	10	2	8
	PC6. To operate CNC Milling machine to perform different operations	10	2	8
	PC7. To grind the Mould Plates and Inserts using Surface Grinding machine	10	2	8
	PC8. To Operate the Cylindrical Grinding and	10	2	8

	to perform different operation			
	PC9. To perform Grinding on Guide Pillar and Bush	6.5	1.5	5
	Sub total	**86.5**	**17.5**	**69**
(RSC/N4705) (CPC/N5806) To Study about mould polishing and mould assembly	PC1. Polish the core and cavity	50	15	35
	PC2. Polish the mating parts of mould	20	5	15
	PC3.I dentify the mould parts	20	5	15
	PC4. Assemble the mould independently	20	5	15
	Sub total	**110**	**30**	**80**
(RSC/N4203) (CPC/N7014) Effective working with others	PC1. Display appropriate communication etiquette while working.	2	1	1
	PC2. Display active listening skills while interacting with others at work	2	1	1
	PC3. Demonstrate responsible and disciplined behaviours at the workplace	2	1	1
	PC4. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required.	1.5	0.5	1
	PC5. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt	1.5	0.5	1
	PC6. Display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible	1.5	0.5	1
	PC7. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks	1.5	0.5	1
	PC8. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict.	1.5	0.5	1
	Sub total	**13.5**	**5.5**	**8**
(RSC/N4706) (CPC/N5808) Understand how to Operate CNC Lathe and CNC Milling Machine, Programming of CNC Lathe, Milling machine	PC1. Setting of Work Piece	20	2.5	17.5
	PC2. Setting of Tools and Tool Offset Calculation	20	2.5	17.5
	PC3. Graphic Run of CNC Tool Path Programme	20	2.5	17.5
	PC4. Dry Run of Machine Tool	20	2.5	17.5
	PC5. Running the programme in Full sequence	20	2.5	17.5
	PC6. To perform different operations on machine	18	2.5	15.5
	Sub total	**118**	**15**	**103**
(RSC/N4708) (CPC/N5809)	PC1. Setting of Work Piece	10	2.5	7.5
	PC2. Setting of Tools and Tool Offset	10	2.5	7.5

Understand how to Operate EDM Machine	Calculation			
	PC3. Calculate Spark Gap	10	2	8
	PC4. Dial the both Electrode and job	10	2	8
	PC5. Running the programme in Full sequence	10	2	8
	PC6. To perform different operations on machine	10	2	8
	Sub total	**60**	**13**	**47**
(RSC/N4504) (CPC/N0219) Basics of computer and data entry in MS OFFICE/office Open source suite Software	PC1. Fill and process mandated forms for receiving, processing, or tracking data, enter data from source documents in to Computer application having MS OFFICE software	4	2	2
	PC2. Verify data entered with source documents, checks for compliance and corrects all typographical errors and missing or repeated data.	4	2	2
	PC3. Maintain files of source documents or other information related to data entered.	4	3	1
	PC4. Update database information to reflect most current source information	4	3	1
	PC5. Assist in the filing and storage of security and back up data files	4	3	1
	PC6. Respond to requests for information and access relevant files	2	1	1
	Sub total	**22**	**14**	**8**
	Total	**600**	**150**	**450**