Model Curriculum

CNC Setter and Operator – Electro Discharge Machine (Spark Erosion)

SECTOR: CAPITAL GOODS
SUB-SECTOR: MACHINE TOOLS, DIES, MOULDS AND PRESS TOOLS, PLASTICS MANUFACTURING MACHINERY, TEXTILE MANUFACTURING MACHINERY

OCCUPATION: MACHINING
REF ID: CSC/Q0121, V1.0
NSQF LEVEL: 4

CAPITAL GOODS SKILL COUNCIL

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Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

CAPITAL GOODS SKILL COUNCIL

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: **'CNC Setter and Operator - Electro Discharge Machine (Spark Erosion)'**
QP No. **'CSC/ Q0121, NSQF Level 4'**

Date of Issuance: March 18th, 2015
Valid up to : August 30th, 2016

*Valid up to the next review date of the Qualification Pack or the 'Valid up to' date mentioned above (whichever is earlier)

Authorised Signatory
(Capital Goods Skill Council)

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CNC Setter and Operator- Electro Discharge Machine (Spark Erosion)

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a "CNC Setter and Operator – Electro Discharge Machine (Spark Erosion)", in the "Capital Goods" Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	**CNC Setter and Operator - Electro Discharge Machine (Spark Erosion)**		
Qualification Pack Name & Reference ID. ID	CSC/Q0121, v1.0		
Version No.	1.0	**Version Update Date**	
Pre-requisites to Training	12th Standard passed, preferably Minimum 1 year experience as CNC/NC EDM Operator		
Training Outcomes	**After completing this programme, participants will be able to:** • **Set a computer numerically controlled electro discharge machine for machining operations on metal components:** Setting a CNC EDM for machining of metal components by combining different operations as per given specifications. • **Performing machining operations on metal products using CNC EDM:** Machining of range component shapes using CNC EDM as per given specifications. • **Use health and safety practices at the work place:** Understanding of risks and hazards at the work place along with common techniques to minimize risks, deal with accidents, emergencies etc. • **Work effectively with others:** Communication etiquette, discipline, listening, handling conflicts and grievances.		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of "CNC Setter and Operator – Electro Discharge Machine (Spark Erosion)" Qualification Pack issued by "Capital Goods Skill Council".

Sr. No.	Module	Key Learning Outcomes	Equipment Required

1	**Set a Computer Numerically Controlled EDM for Machining Operations on Metal Components**
	
	Theory Duration
	(hh:mm)
	40:00
	Practical Duration
	(hh:mm)
	100:00
	
	Corresponding NOS Code
	CSC/N0121
		• Describe roles and responsibilities of a CNC setter and Operator – Electro Discharge Machine (Spark Erosion)
		• State various opportunities available for CNC EDM machine operators and setters
		• Interpret various systems of measurement
		  ○ Meaning of a 'Unit'
		  ○ CGC, FPS, MKS and SI unit of measurement
		  ○ SI units for 'Fundamental' and 'Derived Quantities'
		  ○ Convert units from one system of measurement to another system
		• Use measuring instruments
		  ○ Steel rules
		  ○ Micrometers(external, internal, depth)
		  ○ Vernier calliper
		  ○ Slip gauge
		  ○ Bore/ hole gauge
		  ○ Thread gauge
		  ○ Plug gauge
		  ○ Radius/profile gauge
		  ○ Dial Test Indicator
		• Explain 'First Angle' and 'Third Angle' projections – Orthographic, Isometric, Sectional views, Exploded views
		• Interpret 'First Angle' and 'Third Angle' component drawings
		• Perform numerical calculations
		  ○ Addition
		  ○ Subtraction
		  ○ Multiplication
		  ○ Division
		  ○ Fractions and decimals
		  ○ Percentages and proportions
		  ○ Simple ratios and averages
		• Identify various basic, compound and solid shapes
		• Define 'Limits', 'Fits' and 'Tolerances'
		• Classify materials and state their properties and composition – ferrous metals, stainless steel, cast iron, non ferrous metals – aluminium, aluminium alloys, copper and copper alloys, non metals- plastic
		• Explain main features of the CNC EDM machine
		• Identify the working parts of the CNC EDM machine
		• List accessories used in CNC EDM operation
			Training Kit (PowerPoint, Trainer Guide)
			CNC EDM machine with all accessories, Personal Protective Equipment (PPE) Steel rules, Micrometers (External, internal, depth),Vernier callipers, Slip gauge, Bore/ hole gauge, Thread gauge, Plug gauge, Radius/profile gauge, Dial Test Indicator, Electrodes (Plain/Profile/Hollow),jigs/fixtures, Work holding devices, pneumatic or magnetic table, machine vice, angle plate, Vee block, clamps, Chucks (3 jaw or 4 jaw), Sample instruction sheets.

Sr. No.	Module	Key Learning Outcomes	Equipment Required

		• State various CNC EDM machining operations
		• Explain 'Normal' and 'Emergency situations' while using CNC EDM Machine
		• Read component drawing and derive machining sequence
		• List different types of electrodes used in CNC EDM
		  ○ Plain electrode
		  ○ Profile electrode
		  ○ Hollow electrode
		• Select the correct grade and type of electrode for materials and profiles being matched
		• List various tool holding devices
		• Describe the use of tooling magazine or technology settings
		• Analyze the effect of feed and voltage for various types of materials
		• Select right kind of dielectric fluid based on the material type
		• Predict typical problems that can occur while setting up electrodes in cartridges/holders/ feed mechanisms and list actions to be taken in such cases
		• Explain safety practices and precautions to be followed while using CNC EDM
		  ○ Personal Protective Equipment (PPE)
		  ○ Machine guards are in place
		  ○ Cutting tools are suitable for use
		  ○ Components are secured
		• Follow safety precautions while using CNC EDM machine
		• Comply with health , safety, environmental and other relevant regulations and guidelines at work place
		• Keep the work area clean and free from any potential hazards
		• Correctly wear suggested Personal Protective Equipment (PPE)
		• Gather job instruction sheet/ job card, work drawings, planning documentation , quality control documents, operation sheet, process specification from valid sources
		• Interpret symbols and conventions appropriate to BS, ISR or BSEN, DIN etc.
		• Deduce information like
		  ○ Raw material requirement
		  ○ Component requirement
		  ○ Dimensions
		  ○ Limits and tolerances
		  ○ Surface texture requirements
		  ○ Sequence of operations required
		  ○ Shape of profiles to be machined
		  ○ Requirement of tools and equipment	

Sr. No.	Module	Key Learning Outcomes	Equipment Required

		• Carryout preliminary checks on CNC EDM machine
		  ○ Machine should be clean and free from dust
		  ○ Work piece position and alignment
		  ○ Functioning of the lubrication system
		  ○ Check the coolant level
		  ○ Sub systems are in proper working condition
		• Gather appropriate measuring tools as per requirement
		• Use only calibrated measuring instruments and read calibration details mentioned on the measuring tool
		• Verify that correct electrode is being used and the electrode is in usable condition
		• Gather required tools based on the machining operations to be carried out
		• Set tools in the magazine as per the machining sequence
		• Pre set electrodes in tool holder manually or using jigs/fixtures
		• Position electrode holders in the correct position
		• Match tool number with electrode holder
		• Key- in relevant tooling data in the program
		• Set electrode datum point
		• Mount and set the required work holding devices, work piece and electrode
		• Position and secure work pieces to the machine table
		• Set machine tool operating parameters as per component specification
		• Set up the machine as per the component to be produced
		  ○ Current density
		  ○ Spark frequency
		  ○ Alignment of electrode
		  ○ Filtration equipment
		  ○ Linear feeds and speed
		  ○ Dielectric flow rate
		  ○ Ventilation and fume extraction
		  ○ Safety mechanisms and devices
		• Produce machine components with various features
		  ○ Faces (angular, flat, square, parallel)
		  ○ Threads
		  ○ Forms (concave, convex, internal/external profiles, square/ rectangular)
		  ○ Holes (On pitch circles, tapered)
		  ○ Linear holes (rows, angles)
		  ○ Engraving	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		○ Cavities ○ Radii/arcs ○ Parallel or tapered step/slots/shoulders ○ Other special features • Perform trial runs till the desired accuracy is achieved as per the specification ○ Component to be free from false starts and sharp edges ○ Surface texture 0.008mm ○ Machined holes within H8 ○ Angles with +/- 0.5 degree ○ Flatness or squareness 0.025 mm per 25 mm • Handover the machine to the operator with required documentation • Report any unresolved issue to the immediate supervisor • Identify problems with work planning, procedures, output etc. • Demonstrate problem solving abilities • Plan, prioritize and sequence work as per the job requirement • Work in a team to achieve better results	
2	**Perform Machining Operations on Metal products using Computer Numerically Controlled Electro Discharge Machine** **Theory Duration** (hh:mm) 10:00 **Practical Duration** (hh:mm) 90:00 **Corresponding NOS Code** CSC/N0118	• Explain safety precautions to be taken while operating CNC EDM • State various display messages and explain their meaning • List modes of machine control • Explain machine operation using single block run, full program run, and feed/speed override controls • Explain the importance of spark gap • List corrective actions to be taken in case of electrode wear • Define 'Sparking' and 'Arcing' in EDM machining • State the importance of flushing and flow of EDM oil • Explain the procedure for dressing and reshaping of electrodes • Interpret applications of dielectric and ionized fluids with regard to different materials being machined • Explain the procedure to handle and store dielectric and ionized fluids • Analyze problems due to electrical discharge and take corrective actions to address such problems • Establish job requirements from the job specification document • Carryout preliminary checks on CNC EDM machine ○ Machine should be clean and free	Training kit (Trainer guide, PowerPoint) CNC EDM machine with all accessories, Personal Protective Equipment (PPE) Steel rules, Micrometers (External, internal, depth),Vernier callipers, Slip gauge, Bore/ hole gauge, Thread gauge, Plug gauge, Radius/profile gauge, Dial Test Indicator, Electrodes (Plain/Profile/Hollow),jigs/fixtures, Work holding devices, pneumatic or magnetic table, machine vice, angle plate, Vee block, clamps,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		from dust ○ Referencing zero return ○ Functioning of the lubrication system ○ Check the coolant level ○ Sub systems are in proper working condition ○ Confirmation from the setter • Extract information from reference charts, tables, graphs and standards ○ Tapping sizes and threads ○ Component ratings ○ Machining symbols ○ Tolerances • Hold components securely without distortion and ensure that the tool is not touching the component to be machined • Verify that the correct electrode is being used as per the specification • Check the level of dielectric fluid, and ensure that the dielectric fluid is maintained at the proper level as per the recommendation • Verify that correct program is loaded in the control panel as per the component to be manufactured • Produce components with various materials ○ Low, medium and high carbon steels ○ Low alloy steels ○ Stainless steel ○ Cast iron ○ Aluminimum ○ Aluminium alloys ○ Bronze ○ Silicon • Produce machine components with various features ○ Faces (angular, flat, square, parallel) ○ Threads ○ Forms (concave, convex, internal/external profiles, square/ rectangular) ○ Holes (On pitch circles, tapered) ○ Linear holes (Rows, angles) ○ Engraving ○ Cavities ○ Radii/arcs ○ Parallel or tapered step/slots/shoulders ○ Other special features • Test the component produced for dimensional accuracy ○ Components to be free from false starts and sharp edges ○ Dimensional tolerance of 20 to 30 microns ○ Surface texture 8 microns	Chucks (3 jaw or 4 jaw),

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		○ Machine Holes with H6 ○ Angles within +/- 0.5 degree ○ Flatness or squareness 0.025 mm • Identify defects and take prompt actions to deal with such defects • Seek help from the supervisor in case of unresolved problems • Fill up appropriate forms and complete documents as required • Plan, prioritize and sequence work operations as per job requirement • Demonstrate problem solving abilities • Engage with the team to achieve desired results • Seek assistance from fellow team members	
3	**Health and safety** **Theory Duration** (hh:mm) 10:00 **Practical Duration** (hh:mm) 08:00 **Corresponding NOS Code** CSC/N1335	• Explain the importance of personal protective equipment (PPE) required • State the causes for accidents • Identify job site hazardous work and state possible causes of risk or accident at the workplace • Explain the importance of '5S' at the workplace	Training kit (Trainer guide, PowerPoint) Leather gloves, leather apron, welding screen – helmet types, hand screen welding and safety shoes
4	**Fire Safety** **Theory Duration** (hh:mm) 05:00 **Practical Duration** (hh:mm) 30:00 **Corresponding NOS Code** CSC/N1335	• Explain types of fires - Class A, B, C and D • Select appropriate fire extinguisher to control fire • Use PASS method to operate a fire extinguisher • Follow fire safety signs and safe evacuation method in case of a fire • Identify the location of assembly point, fire exit, fire alarm • Follow reporting procedure in case of a fire	Training kit (Trainer guide, PowerPoint) Class A, B, C, D and K fire extinguishers
5	**Emergencies, rescue and first aid procedure** **Theory Duration** (hh:mm) 09:00 **Practical Duration** (hh:mm) 18:00	• Follow electrical safety procedures • Use approved method to rescue a person from electrocution • State the importance of first aid • Identify the contents of a first aid kit and their application • Administer first aid in case of bleeding, burns, choking, electrical shock, poisoning, etc. • Use of CPR process • Bandage wounds	Training kit (Trainer guide, PowerPoint) First aid kit with all contents

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code CSC/N1335	• Explain stages of crisis and crisis management • Prepare an incident report	
6	**Work effectively with others** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 60:00 **Corresponding NOS Code** CSC/N1336	• Explain the importance of team work and team dynamics • State 4Cs of working in a team • Explain types of communication • Apply effective communication technique • Overcome barriers to effective communication • Demonstrate active listening skills • Demonstrate good customer service skills • Explain the importance of ethical behaviour in your day-to-day work • State the importance of discipline in life and apply the same at workplace	Training kit (Trainer guide, PowerPoint)
	Total Duration **Theory Duration 94:00** **Practical Duration 306:00**	**Unique Equipment Required:** CNC EDM Machine with all accessories, steel rules, micrometers (External, internal, depth),vernier callipers, slip gauge, bore/ hole gauge, thread gauge, plug gauge, radius/profile gauge, dial Test Indicator, electrodes (Plain/Profile/Hollow),jigs/fixtures, work holding devices, pneumatic or magnetic table, machine vice, angle plate, Vee block, clamps, Chucks (3 jaw or 4 jaw),Personal Protective Equipment (PPE), Class A, B, C, D and K fire extinguishers, First aid kit with all contents	

Grand Total Course Duration: **400 Hours, 0 Minutes**

*(This syllabus/ curriculum has been approved by **Capital Goods Skill Council**)*

Trainer Prerequisites for Job role: "CNC Setter and Operator – Electro Discharge Machine (Spark Erosion)" mapped to Qualification Pack: "CSC/Q0121 v1.0"

Sr. No.	Area	Details
1	**Description**	Perform setup operations on and operate computer numerically controlled (CNC) electro discharge machine (EDM) (spark erosion) to modify a range of component shapes, as per given specifications.
2	**Personal Attributes**	Basic communication, numerical and computational abilities. Openness to learning, ability to plan and organize own work and identify and solve problems in the course of working. Understanding the need to take initiative and manage self and work to improve efficiency and effectiveness.
3	**Minimum Educational Qualifications**	Diploma /Degree in Mechanical Engineering
4a	**Domain Certification**	Certified for Job Role: "CNC Setter and Operator – Electro Discharge Machine (Spark erosion)" mapped to QP: "CSC/Q0201, v1.0". Minimum accepted score is 80%
4b	**Platform Certification**	Recommended that the Trainer is certified for the Job Role: "Trainer", mapped to the Qualification Pack: "MEP/Q0102". Minimum accepted as per respective SSC guidelines is 80%.
5	**Experience**	• 6-7 years of industry experience in the relevant field • 1-2 years of teaching experience

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	CNC Setter and Operator- Electro Discharge Machine (Spark erosion)
Qualification Pack	CSC/Q0121, v1.0
Sector Skill Council	Capital Goods Skill Council

Sr. No.	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 lay down 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 center (as per assessment criteria below).
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this 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	Assessment Criteria	Total Mark (400)	Out Of	Marks Allocation	
				Theory	Skills Practical
1.CSC/N0121 Set a Computer Numerically Controlled Electro-Discharge Machine for Machining Operations on Metal Components	PC1. work safely at all times, complying with health and safety and other relevant regulations and guidelines	100	4	1	3
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations		5	1	4
	PC3. ensure machine guards are in place and correctly adjusted		2	0	2
	PC4. confirm the machine readiness for the machining activities to be carried out		3	0	3
	PC5. obtain and use the appropriate job specification documentation from valid source		2	0	2
	PC6. read and establish job requirements from the job specification document		3	0	3
	PC7. use and extract information from reference charts, tables, graphs and standards		3	0	3
	PC8. seek any necessary instructions/support/information on the operation of the machine, where appropriate		3	0	3
	PC9. hold components securely without distortion		4	0	4

Assessable Outcome	Assessment Criteria	Total Mark (400)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC10. check that the correct electrode is in place and is in usable condition		3	0	3
	PC11. ensure that the dielectric fluid is at an appropriate level		3	0	3
	PC12. check that the operating program is at the correct start point		3	0	3
	PC13. ensure that the work piece is clear of the tooling before starting the machine		2	0	2
	PC14. follow the defined procedures for starting and running the operating system		5	2	3
	PC15. conduct a preliminary check to ensure EDM readiness for production		4	0	4
	PC16. ensure that machine settings are adjusted as and when required to maintain the required accuracy		3	0	3
	PC17. produce component shapes on a range of Materials		4	0	4
	PC18. produce machined components with the required features		4	0	4
	PC19. produce components with dimensional accuracy, form and surface texture as per specifications and required standards		6	2	4
	PC20. deal promptly and effectively with error messages or equipment faults that are within their control and report those that cannot be solved		4	0	4
	PC21. monitor the computer process and ensure that the production output is to the required specification		6	2	4
	PC22. shut down the equipment to a safe condition on conclusion of the activities		2	0	2
	PC23. check that the components produced meet the required specification for quality and accuracy		6	2	4
	PC24. use appropriate gauges or instruments to carry out the necessary checks, during production, for testing accuracy parameters		4	0	4
	PC25. identify unsatisfactory output and defects		3	0	3
	PC26. deal with defects and output shortcomings per procedures and appropriate rectification/further processing techniques		6	2	4
	PC27. deal promptly and effectively with problems within span of responsibility and control and report those that cannot be solved		3	0	3
	Total		**100**	**12**	**88**
	PC1.work safely at all times, complying with health and safety and other relevant regulations and guidelines		4	1	3
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment		5	1	4

Assessable Outcome	Assessment Criteria	Total Mark (400)	Out Of	Marks Allocation	
				Theory	Skills Practical
2.CSC/N0118 Perform machining operations on metal products using computer numerically controlled electro-discharge machine	(PPE) and other relevant safety regulations	100			
	PC3.ensure machine guards are in place and correctly adjusted		3	0	3
	PC4.read and establish job requirements from the job specification document		3	0	3
	PC5.carry out preliminary check and confirm the machine readiness for the machining activities to be carried out		4	0	4
	PC6.obtain and use the appropriate job specification documentation and specifications from valid source		3	0	3
	PC7.use and extract information from reference charts, tables, graphs and standards		3	0	3
	PC8.seek any necessary instructions/support/information on the operation of the machine, where appropriate		3	0	3
	PC9. hold components securely without distortion		3	0	3
	PC10.check that the correct electrode is in place and is in usable condition		4	0	4
	PC11.ensure that the dielectric fluid is at an appropriate level		3	0	3
	PC12.check that the operating program is at the correct start point		3	0	3
	PC13. ensure that the work piece is clear of the tooling before starting the machine		3	0	3
	PC14.follow the defined procedures for starting and running the operating system		4	1	3
	PC15.ensure that machine settings are adjusted as and when required to maintain the required accuracy		3	0	3
	PC16.produce component shapes on a range of materials		5	0	5
	PC17.produce machined components with the required features		5	0	5
	PC18.produce components with dimensional accuracy, form and surface texture as per specifications and required standards		6	2	4
	PC19.deal promptly and effectively with error messages or equipment faults that are within their control and report those that cannot be solved		4	0	4
	PC20.monitor the computer process and ensure that the production output is to the required specification		4	1	3
	PC21.shut down the equipment to a safe condition on conclusion of the activities		3	0	3
	PC22.check that the components produced meet the required specification for quality and accuracy		5	2	3
	PC23.use appropriate gauges or instruments to carry out the necessary checks, during production, for testing accuracy parameters		5	2	3

Assessable Outcome	Assessment Criteria	Total Mark (400)	Out Of	Marks Allocation	
				Theory	Skills Practical
	PC24.identify unsatisfactory output and defects		3	0	3
	PC25.deal with defects and output shortcomings per procedures and appropriate rectification/further processing techniques		6	2	4
	PC26.deal promptly and effectively with problems within span of responsibility and control and report those that cannot be solved		3	0	3
	Total		**100**	**12**	**88**
3.CSC/ 1335 Use basic health and safety practices at the workplace	PC1.use protective clothing/equipment for specific tasks and work conditions	**100**	5	2	3
	PC2.state the name and location of people responsible for health and safety in the workplace		3	1	2
	PC3.state the names and location of documents that refer to health and safety in the workplace		3	1	2
	PC4.identify job-site hazardous work and state possible causes of risk or accident in the workplace		5	2	3
	PC5.carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role		4	2	2
	PC6.state location of general health and safety equipment in the workplace		3	2	1
	PC7.inspect for faults, set up and safely use steps and ladders in general use		5	2	3
	PC8.work safely in and around trenches, elevated places and confined areas		5	2	3
	PC9.lift heavy objects safely using correct procedures		5	2	3
	PC10.apply good housekeeping practices at all times		4	2	2
	PC11.identify common hazard signs displayed in various areas		5	2	3
	PC12.retrieve and/or point out documents that refer to health and safety in the workplace		3	1	2
	PC13.use the various appropriate fire extinguishers on different types of fires correctly		4	1	3
	PC14.demonstrate rescue techniques applied during fire hazard		4	1	3
	PC15.demonstrate good housekeeping in order to prevent fire hazards		3	1	2
	PC16.demonstrate the correct use of a fire extinguisher		4	1	3
	PC17.demonstrate how to free a person from electrocution		4	1	3
	PC18.administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.		4	1	3
	PC19. demonstrate basic techniques of bandaging		3	1	2
	PC20.respond promptly and appropriately to an		4	1	3

Assessable Outcome	Assessment Criteria	Total Mark (400)	Out Of	Marks Allocation	
				Theory	Skills Practical
	accident situation or medical emergency in real or simulated environments				
	PC21.perform and organize loss minimization or rescue activity during an accident in real or simulated environments		3	1	2
	PC22.administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases		3	1	2
	PC23.demonstrate the artificial respiration and the CPR Process		3	1	2
	PC24.participate in emergency procedures		3	2	1
	PC25.complete a written accident/incident report or dictate a report to another person, and send report to person responsible		4	1	3
	PC26.demonstrate correct method to move injured people and others during an emergency		4	1	3
	Total		**100**	**36**	**64**
3.CSC/N1336 Work effectively with others	PC1.accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	**100**	10	3	7
	PC2.accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		10	3	7
	PC3.give information to others clearly, at a pace and in a manner that helps them to understand		10	3	7
	PC4.display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible		10	3	7
	PC5.consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		10	3	7
	PC6.display appropriate communication etiquette while working		10	3	7
	PC7.display active listening skills while interacting with others at work		10	3	7
	PC8.use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism		10	3	7
	PC9.demonstrate responsible and disciplined behaviours at the workplace		10	3	7
	PC10.escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict		10	3	7
	Total		**100**	**30**	**70**
	Grand Total	**400**	**400**	**90**	**310**
	Percentage Weightage:			**23**	**77**
	Minimum Pass% to qualify (aggregate):			**60**	