Model Curriculum

Forger

SECTOR: CAPITAL GOODS
SUB-SECTOR: Light Engineering Goods
OCCUPATION: Forging
REF ID: CSC/Q1101, V1.0
NSQF LEVEL: 3

Skill India
कौशल भारत-कुशल भारत

CGSC
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: **'Forger'** QP No. **'CSC/ Q 1101, NSQF Level 3'**

Date of Issuance: Nov 24th,2017

Valid up to : Nov 24th,2021

**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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Forger

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a "Forger", in the "Capital Goods" Sector/Industry and aims at building the following key competencies amongst the learner

Program Name	**Forger**		
Qualification Pack Name & Reference ID. ID	CSC/Q1101, v1.0		
Version No.	1.0	**Version Update Date**	26/12/2018
Pre-requisites to Training	10th Standard pass, preferably Minimum 18 Years of age		
Training Outcomes	**After completing this programme, participants will be able to:** • **Apply forging technique on ferrous and non-ferrous metal alloys:** producing of complex solid forged shapes by forging of ferrous and non-ferrous metals and alloys using a range of forging techniques, tools and jigs, as per approved procedures. • **Perform heat treatment operations on ferrous and non-ferrous metals and alloys using a variety of equipment:** performing heat treatment operations on ferrous, non-ferrous metals and alloys using a variety of equipment. The applications for it would include cast metal products, machine tooling, and forged and machined components. • **Demonstrate basic health and safety practices at the workplace:** identify risks and hazards at workplace, use of PPE, and apply good housekeeping practices etc. • **Work effectively with others:** effectively communicate with others and demonstrate good ethical practices and discipline.		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of "Forger" Qualification Pack issued by "Capital Goods Skill Council".

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	**Fundamentals of Forging** **Theory Duration** (hh:mm) 30:00 **Practical Duration** (hh:mm) 20:00 **Corresponding NOS Code** CSC/N1101	• Distinguish between ferrous and non-ferrous metal. • Define various physical properties of ferrous and non-ferrous metals. • State the purpose of 'Forging'. • Explain the effects of oxidation/burning, carburization on ferrous metals. • Explain the effects of heating and cooling on ferrous metals. • State the effect of forging on the structure of ferrous metals. • Describe the importance of heat treatment. • Explain various heat treatment techniques. • Explain various methods and techniques of forging such as hammer or drop forging, press forging, open-die forging, closed-die forging. • Differentiate between various types of forgings. • Describe various activities involved in forging. • Explain various types of presses used in forging such as hydraulic presses, mechanical presses, screw presses, hammers (gravity drop; power drop; counter blow (two rams)), high pressure gas. • Explain the process of forging. • Identify various tools and equipment used in forging operation such as hammers (hand hammer; sledge hammer; power hammer), tongs, punches, chisels, anvil, leg vice, swage block, floor mandrel, swages, swage blocks, jig setter, fly press set up, shafted tools, wired tools, shovel, blower, poker, fullers, flatters. • Explain various safety precautions to be followed while forging processes such as tool set up, tong setting, jig setting, setting top and bottom tools, anvil height setting, press set up.	Training kit (Trainer guide, Presentations), hydraulic press, mechanical press, various types of hammers, tongs, punches, chisel, anvil, leg vice, swage block, floor mandrel, swages, jig setter, shafted tools, wired tools, shovel, blower, poker, fullers, flatters, various ferrous & non-ferrous metal samples, Upsetter, Material cutting machine, Personal Protective Equipment (PPE).
2	**Forging operation on ferrous & non-ferrous metals and alloys for metal working** **Theory Duration**	• Identify workplace hazards to avoid accidents. • Identify various Personal Protective Equipment (PPE) required for forging operation. • Interpret job specifications accurately from sources such as job instruction	Training kit (Trainer guide, Presentations), hydraulic press, mechanical press, various types of hammers, tongs,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	(hh:mm) 20:00 **Practical Duration** (hh:mm) 50:00 **Corresponding NOS Code** CSC/N1101	sheet/ job card, work drawings and instructions, planning documentation, quality control documents, operation sheets, process specifications, instructions from supervisor. • Prepare the work area for the forging operation as per the standard procedure. • Setup machines and dies for carrying out forging operation. • Identify various marking tools used in the forging operation. • Use templates to transfer features on to the work pieces as per the job specification. • Attach correctly hammer tools and fixtures to the power hammer. • Set the work piece correctly in the work holding devices. • Perform forging operation as per the standard procedure. • Check the forged component for dimensional accuracy and surface imperfections. • Arrange all tools and equipment at the allocated location only. • Identify problems that might occur during the forging operation and take appropriate measures to avoid such problems. • Escalate problems to the concerned authority. • Plan the sequence of operations as per the standard operating procedure. • Perform numerical calculations and explain various systems of measurements. • Manage time to achieve better results. • Communicate and cooperate with the team members.	punches, chisel, anvil, leg vice, swage block, floor mandrel, swages, jig setter, shafted tools, wired tools, shovel, blower, poker, fullers, flatters, various ferrous & non-ferrous metal samples, Upsetter, Material cutting machine, Personal Protective Equipment (PPE).
3	**Heat treatment operations on ferrous and non-ferrous metals and alloys** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 40:00	• Identify commonly used metals, non-metals and alloys. • Explain physical properties of commonly used ferrous metals such as carbon steels, stainless steels, cast iron, tool steel, hard metals and non-ferrous materials such as bronze, bronze alloys, copper and copper alloys etc. • Perform numerical calculations and explain various systems of measurement. • Describe various heat treatment processes.	Training kit (Trainer guide, Presentations), various metal samples- carbon steel, stainless steel, cast steel, tool steel, bronze, bronze alloys, copper, copper alloys, Various types of furnaces (gas, electric, oil fired). hearth, pit,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code CSC/N1001	• List various equipment and tools required for heat treatment such as furnaces (gas, electric, oil fired, vacuum, hearth, pit type, muffle); induction heating; kilns; tempering ovens; heated baths; salt baths; gas torches; specialised tongs/tools and lifting equipment. • State the effect of temperature and time on the heat treatment process. • Identify work holding devices used in the heat treatment. • Adhere to prescribed safety standards and procedures while carrying out the heat treatment procedure. • Interpret job instructions such as raw materials or components required (type, quality, quantity), dimensions and surface texture requirements, limits and tolerances, operations required (list, sequence and procedures where applicable) timelines accurately. • Prepare the material to receive the appropriate heat treatment, which includes cleaning the surface (e.g. removing scale, oil and dirt); degreasing; drying at the correct temperature; masking the materials to contain the case hardening or carburising deposits; polishing the material surface to be tempered using manual methods; packing or coating the components with a carbon enriched material; pre-heating before immersion into a salt bath; pickling; sand blasting; ascertain type of loading. • Check the condition of the heat treatment equipment and inform the immediate supervisor in case of any observations. • Perform heat treatment operations.	induction heating, kilns, tempering ovens, heated baths, gas torches, specialized tongs, lifting equipment etc., Personal Protective Equipment
4	**Quenching operations on ferrous and non-ferrous metals and alloys** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 40:00 **Corresponding NOS**	• Cool the heated objects as per the standard procedure. • Carry out cooling/quenching using the appropriate medium and technique such as fresh water, salt water, oil, air, sand, left in the furnace to cool. • Check the quality of the heat treated objects for any defects. • Address problems immediately to achieve the expected outcome. • Plan sequence of operations as per the job instruction sheet. • Manage time better to achieve better	Training kit (Trainer guide, Presentations), various metal samples- carbon steel, stainless steel, cast steel, tool steel, bronze, bronze alloys, copper, copper alloys, Various types of furnaces (gas, electric, oil fired). hearth, pit,

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Code CSC/N1001	results. • Perform documentation as per the organizational policy.	induction heating, kilns, tempering ovens, heated baths, gas torches, specialized tongs, lifting equipment etc., Personal Protective Equipment
5	**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). • Identify appropriate PPE for the various tasks performed. • Identify job site hazards at the workplace such as sharp edged and heavy tools; heated metals; gas cylinders; welding radiation; hazardous surfaces (sharp, slippery, uneven, chipped, broken, etc.); hazardous substances (chemicals, gas, fumes, dust, etc.); physical hazards (working at heights, large and heavy objects and machines, sharp and piercing objects, tools and machines, intense light, load noise, obstructions in corridors, by doors, blind turns, noise, over stacked shelves and packages, etc.), electrical hazards (power supply and points, loose and naked cables and wires, electrical machines and appliances, etc.) to avoid accidents at the work place. • Identify possible causes of risk and accidents at the workplace such as: physical actions; reading; listening to and giving instructions; inattention; sickness and incapacity (such as drunkenness); health hazards (such as untreated injuries and contagious illness). • Identify the names and locations of people responsible for health and safety in the workplace. • Identify documents that refer to health and safety in the workplace and where they are located. • Carry out safe working practices such as using protective clothing and equipment; putting up and reading safety signs; handle tools in the correct manner, store and maintain them properly; keep work area clear of clutter, spillage and unsafe object lying	Training kit (Trainer guide, Presentation), leather gloves, leather apron, welding screen – helmet types, hand screen welding and safety shoes.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		casually; while working with electricity take all electrical precautions like insulated clothing, adequate equipment insulation, use of control equipment, dry work area, switch off the power supply when not required, etc.; safe lifting and carrying practices; use equipment that is working properly and is well maintained; take due measures for safety while working in confined places, trenches or at heights, etc. including safety harness, fall arrestors, etc. while dealing with hazards to ensure the safety of self and others. • Inspect steps and ladders for faults such as corrosion of metal components, deterioration, splits and cracks timber components, imbalance, loose rungs, missing/ unfixed nuts or bolts, etc., set them at firm/level base, clip/lash down, leaning at the correct angle, etc. and use them safely. • Work safely in and around trenches, elevated places and confined areas. • Lift heavy objects safely using correct procedures. • Apply good housekeeping practices such as clean/tidy work areas, removal/disposal of waste products, protect surfaces at all times. • Identify common hazard signs displayed in various areas such as on chemical containers; equipment; packages; inside buildings; in open areas and public spaces, etc.	
6	**Fire Safety** **Theory Duration** (hh:mm) 05:00 **Practical Duration** (hh:mm) 30:00 **Corresponding NOS Code** CSC/N1335	• Identify causes of fire accidents. • Recognise required fire extinguisher based on the types of fire such as class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (these categories of fires become class A, B and D fires when the electrical equipment that initiated the fire is no longer receiving electricity); class D: combustible metals such as magnesium, titanium, and sodium (these fires burn at extremely high temperatures and require special suppression agents).	Training kit (Trainer guide, Presentation), Class A, B, C and D fire extinguishers.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		• Use the appropriate fire extinguishers on different types of fires correctly. • Interpret fire safety signs. • Inspect evacuation plan in case of fire. • Identify the location of assembly point, fire exit and fire alarm. • Follow reporting procedure in case of a fire. • Participate in fire safety drills at the workplace. • Demonstrate good housekeeping in order to prevent fire hazards.	
7	**Emergencies, rescue and first aid procedure** **Theory Duration** (hh:mm) 09:00 **Practical Duration** (hh:mm) 18:00 **Corresponding NOS Code** CSC/N1335	• 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. • Administer first aid in case of minor injuries, bleeding, burns, choking, electrical shock, poisoning, etc. • Demonstrate the artificial respiration and CPR process. • Follow correct method to move injured people and others during an emergency. • Explain stages of crisis and crisis management. • Participate in emergency procedures such as raising alarm, safe/efficient evacuation, identifying correct means of escape, identifying correct assembly point, attending roll call, correct return to work as per role. • Prepare an accident/incident report including details of name, date/time of incident, date/time of report, location, environment conditions, persons involved, sequence of events, injuries sustained, damage sustained, actions taken, witnesses, supervisor/manager notified or dictate a report to another person and send report to person responsible.	Training kit (Trainer guide, Presentation), First aid kit with all contents.
8	**Working effectively with others** **Theory Duration** (hh:mm) 20:00 **Practical Duration** (hh:mm) 60:00	• State various categories of people that one is required to communicate and co-ordinate within the organization. • Explain the importance of effective communication in the workplace. • Explain the importance of teamwork in organizational and individual success. • Describe various components of effective communication and active listening. • Describe the barriers to effective	Training kit (Trainer guide, Presentation).

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	Corresponding NOS Code CSC/N1336	communication. • Provide and receive information to and from authorized persons accurately and within agreed timescale. • Communicate information to others clearly, at a pace and in a manner that helps them to understand. • Work with colleagues in a positive and helpful manner, where required and possible. • Take measures to maximize effectiveness and efficiency in carrying out tasks by consulting with and assisting others. • Follow appropriate communication etiquette while working such as not using abusive language; usage of appropriate titles and terms of respect; not eating or chewing while talking (vice versa), using appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism, etc. • Apply active listening skills while interacting with others at work. • Explain the importance of ethics and discipline for professional success. • Describe common reasons for interpersonal conflict and ways of managing interpersonal conflict effectively. • Explain the importance of developing effective working relationships for professional success. • Display responsible and disciplined behaviors at the workplace such as punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc. • Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict.	
	Total Duration **Theory Duration** **134:00** **Practical Duration** **266:00**	**Unique Equipment Required:** hydraulic press, mechanical press, various types of hammers, tongs, punches, chisel, anvil, leg vice, swage block, floor mandrel, swages, jig setter, shafted tools, wired tools, shovel, blower, poker, fullers, flatters, various ferrous & non-ferrous metal samples, various metal samples- carbon steel, stainless steel, cast steel, tool steel, bronze, bronze alloys, copper, copper alloys, Various types of furnaces (gas, electric, oil fired). hearth, pit, induction heating, kilns, tempering ovens, heated baths, gas torches, specialized tongs, lifting equipment etc., apron, gloves, safety boots, overalls, eye shields, goggles, ear plugs, measuring instruments, Class A, B, C and D fire extinguishers, PPE, First aid	

Sr. No.	Module	Key Learning Outcomes	Equipment Required
		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: "Forger" mapped to Qualification Pack: "CSC/Q1101 v1.0"

Sr. No.	Area	Details
1	**Description**	Producing of complex solid forged shapes by forging of on ferrous & non-ferrous metals and alloys using a range of forging techniques, tools and jigs, as per approved procedures.
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: "Forger" mapped to QP: "CSC/Q1101, 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**	• 3-4 years of industry experience in the relevant field • 3-4 years of teaching experience

Criteria For Assessment Of Trainees

Job Role: Forger

Qualification Pack: CSC/Q1101

Sector Skill Council: Capital Goods Skill 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 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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Total Marks: 400	**Compulsory NOS**			**Marks Allocation**	
Assessment outcomes	**Assessment Criteria for outcomes**	**Total Marks**	**Out of**	**Theory**	**Skills Practical**
CSC/N1101 Perform forging techniques on ferrous & non-ferrous metals and alloys for metalworking	PC1.comply with health and safety, environmental and other relevant regulations and guidelines at work and ensure process compliance	**100**	3	1	2
	PC2.adhere to procedures or systems in place for risk assessment, occupational standards, personal protective equipment (PPE) and other relevant occupational safety regulations		4	1	3
	PC3.work following laid down procedures and instructions		3	1	2
	PC4.ensure that all tools, equipment, power tool cables, extension leads are in a safe and usable condition and are kept at secured location		2	0	2

	PC5.ensure that all measuring equipment are within calibration date and are approved for usage		2	0	2
	PC6.ensure work area is clean and safe from hazards before and after the job is completed		2	0	2
	PC7.obtain job specification from a valid and approved source following due procedure		2	0	2
	PC8.read and establish job requirements from the job specification document accurately		3	1	2
	PC9.report and rectify incorrect and inconsistent information in job specification documents as per organization procedures		3	1	2
	PC10.prepare the work area for the forging operations as per procedure		2	0	2
	PC11.ensure availability of prepared work-pieces /raw materials for forging as per job requirements		3	1	2
	PC12.ensure availability appropriate tools and equipment per job requirements		2	0	2
	PC13.set up machines and dies for carrying out forging		2	0	2
	PC14.measure and mark out specified features for plate bending and forming on the workpieces as per job specification using appropriate measuring and marking out tools and equipment		3	1	2
	PC15.trace/transfer the specified features from the templates onto the workpieces as per job specification		3	1	2
	PC16.ensure that the material to be forged is safely and correctly positioned in the forming equipment as per specification		3	1	2
	PC17.maintain and control a solid fuel forge hearth safely to meet given objectives		4	2	2
	PC18.attach hammer tools and fixtures to power hammer correctly		2	0	2
	PC19.select and combine common forge work techniques to produce forged products and tools that are fit for purpose		2	0	2
	PC20.select heating plant and equipment as per the work undertaken		2	0	2
	PC21.set work pieces as per job requirements using appropriate positioning and/or holding devices		4	1	3

	PC22.apply techniques used to heat heavy and complex forgings correctly		3	0	3
	PC23.carry out common heat treatments of normalising and annealing on forged steel and minimise the effects of oxidation and overheating		4	0	4
	PC24.apply post-forging heating safely and as per organisational procedures		5	1	4
	PC25.deal with the hot forgings safely and as per organisational procedures		3	1	2
	PC26.prepare and use an inspection and maintenance checklist and report on the condition of a range of common forge equipment		2	0	2
	PC27.carry out the necessary repair/maintenance of forge hand tooling		2	0	2
	PC28.check forging to ensure conformance to tolerances and specifications to ensure completeness of work		5	2	3
	PC29.identify common forging imperfections and correct errors		2	0	2
	PC30.keep finished components as well as raw material as per organizational procedure established		3	1	2
	PC31.produce components as per standards applicable to the process and in line with production targets		3	1	2
	PC32.report conditions and seek appropriate assistance in a timely manner to address risk of failure to comply with necessary targets and specifications		2	0	2
	PC33.deal with finished components as per organizational guidelines		3	1	2
	PC34.complete documentation during and post operations as per organizational procedures		3	1	2
	PC35.return all tools and equipment to the correct location on completion of the forging activities		2	0	2
	PC36.leave the work area in a safe and tidy condition on completion of job activities		2	0	2
		Total	**100**	**20**	**80**

CSC/N1001 Perform heat treatment operations on ferrous & non-ferrous metals and alloys using a variety of equipment	PC1.comply with health and safety, environmental and other relevant regulations and guidelines at work and ensure process compliance	100	4	1	3
	PC2.adhere to procedures or systems in place for risk assessment, occupational standards, personal protective equipment (PPE) and other relevant occupational safety regulations		5	1	4
	PC3.work following laid down procedures and instructions		4	1	3
	PC4.ensure that all tools, equipment, power tool cables, extension leads are in a safe and usable condition and are kept at secured location		3	0	3
	PC5.ensure work area is clean and safe from hazards before and after the job is completed		3	0	3
	PC6.prepare and maintain the work area as per procedure or operation specification		6	2	4
	PC7.obtain production and consumables materials required for performing heat treatment operations as per specifications from valid sources and job requirements		4	1	3
	PC8.obtain various tools and equipment required for performing heat treatment operations as per specifications		4	1	3
	PC9.ensure that all measuring equipment are within calibration date and are approved for usage		3	0	3
	PC10.prepare the materials in readiness to receive the appropriate heat treatment		4	0	4
	PC11.prepare the components, tools and equipment for the heat treatment activities as specified in the job specification documents		6	2	4
	PC12.check that the heat treatment equipment is at satisfactory operating Conditions		4	0	4
	PC13.carry out various kinds of heat treatment processes e.g. tempering heat treatment process, annealing heat treatment process, normalizing/stress relieving heat treatment process, carburising heat treatment process		8	3	5
	PC14.prepare furnace/forge or torch by lighting, using approved procedures		7	3	4

	PC15.cool the treated object using appropriate amounts of cooling medium so that it will not overheat or reach flash point		5	0	5
	PC16.ensure that components are loaded safely into the heat source/solution and are left for the required induction period		3	0	3
	PC17.remove the components safely and correctly from the heat source/solution		3	0	3
	PC18.carry out quenching/cooling of the components, using the appropriate medium and technique quenching/cooling media: fresh water, salt water, oil, air, sand, left in the furnace to cool		4	0	4
	PC19.inspect the final heat treated component to check if it is as per specification and without defects		5	2	3
	PC20.deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved		3	0	3
	PC21.shut down the heat treatment equipment to a safe condition on completion of the activities		3	0	3
	PC22.leave the work area in a safe and tidy condition on completion of the fitting activities		3	0	3
	PC23.refer unresolved job related problems to appropriate personnel for support		3	0	3
	PC24.monitor the problem and keep the supervisor informed about progress or any delays in resolving the problem		3	0	3
		Total	**100**	**17**	**83**
CSC/N1335 Use basic health and safety practices at the workplace	PC1.use protective clothing/equipment for specific tasks and work conditions	**100**	4	1	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		4	2	2

	PC6.state methods of accident prevention in the work environment of the job role		3	2	1
	PC7.state location of general health and safety equipment in the workplace		5	2	3
	PC8.inspect for faults, set up and safely use steps and ladders in general use		5	2	3
	PC9.work safely in and around trenches, elevated places and confined areas		5	2	3
	PC10.lift heavy objects safely using correct procedures		4	2	2
	PC11.apply good housekeeping practices at all times		5	2	3
	PC12.identify common hazard signs displayed in various areas		3	1	2
	PC13.retrieve and/or point out documents that refer to health and safety in the workplace		4	1	3
	PC14.use the various appropriate fire extinguishers on different types of fires correctly		3	1	2
	PC15.demonstrate rescue techniques applied during fire hazard		3	1	2
	PC16.demonstrate good housekeeping in order to prevent fire hazards		4	1	3
	PC17.demonstrate the correct use of a fire extinguisher		4	1	3
	PC18.demonstrate how to free a person from electrocution		4	1	3
	PC19.administer appropriate first aid to victims where required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.		3	1	2
	PC20.demonstrate basic techniques of bandaging		3	1	2
	PC21.respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments		3	1	2
	PC22.perform and organize loss minimization or rescue activity during an accident in real or simulated environments		3	1	2
	PC23.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

	PC24.demonstrate the artificial respiration and the CPR Process		3	1	2
	PC25.participate in emergency procedures		4	1	3
	PC26.complete a written accident/incident report or dictate a report to another person, and send report to person responsible		3	1	2
	PC27.demonstrate correct method to move injured people and others during an emergency		4	2	2
		Total	**100**	**36**	**64**
CSC/N1336 Work effectively with others	PC1.receive information accurately and instructions from the supervisor and fellow workers, getting clarification where required	100	10	3	7
	PC2.pass information accurately 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 behavior 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 behaviors 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**