QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS
FOR GEMS & JEWELLERY INDUSTRY

Contents

1. Introduction and Contact..... P1
2. Qualifications Pack P2
3. OS Units..... P3
4. Glossary of Key Terms..... .....P28
5. Nomenclature of QP & NOS.....P30

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

Contact Us:
GJSCI, Mumbai

E-mail: coo@gjsci.org

Introduction

Qualifications Pack-Inclusion Plotter

SECTOR: GEMS & JEWELLERY

SUB-SECTOR: Diamond processing

OCCUPATION: Diamond planning

REFERENCE ID: G&J/Q4203

ALIGNED TO: NCO-2004/ NIL

Inclusion Plotter: Also known as Sorter or Plotter, the inclusion plotterplots different types of inclusions in a diamond on the computer model.

Brief Job Description: Individuals on this job use different technologies such as M-Box, Immersion Glass (IG) and Galaxy, based on Helium/Sarin software, to view and manually or automatically plot different types of inclusions such cloud, surface cavities, blind spots, pin point inclusion, 3D, flat cracks, curved cracks. Inclusion plotting helps the planner determine the can be achieved in the cut stone, which will determine its ultimate value. Hence, precision is important in this job.

Personal Attributes: The job requires the individual to have: attention to details; good eyesight; ability to work for long hours in sitting position in front of the computer; high level of concentration; and a lot of patience.

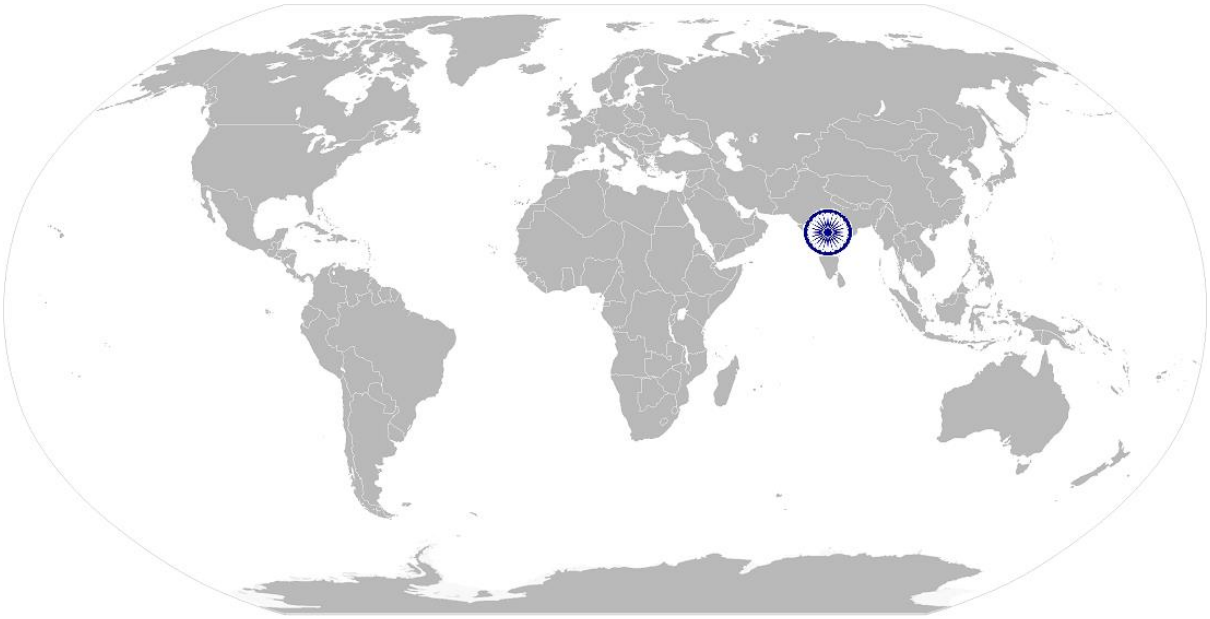
Job Details

Qualifications Pack Code	G&J/Q4203		
Job Role	Inclusion Plotter		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Sector	Gems &Jewellery	Drafted on	10/06/13
Sub-sector	Diamond Processing	Last reviewed on	30/07/13
Occupation	Diamond Planning	Next review date	15/07/15

Job Role	Inclusion Plotter Also known as 'Plotter' or ' M-Box operator' or 'IG operator' or 'Galaxy operator'
Role Description	Using plotting technology to clearly identify and accurately plot all the inclusions in a rough diamond, which may not be visible clearly through the naked eye
NVEQF/NVQF level	4
Minimum Educational Qualifications Maximum Educational Qualifications	Preferably 10th Standard Passed
Training	Not Applicable
Experience	Not Applicable
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. G&J/N4201Dop the diamond 2. G&J/N4203 Plot the inclusions 3. G&J/N9930Maintain IPR 4. G&J/N9931 Coordinate with team and superiors 5. G&J/N9934 Maintain safety **Optional:** Not applicable
Performance Criteria	As described in the relevant OS units

G&J/N4201 **Dop the diamond**

National Occupational Standard



Overview

This unit is a key plotting stage in diamond processing. It involves is fixing rough diamonds securely onto dops or pins or moulds using adhesives or molten glass as per the marking, for the purpose of plotting its inclusions by using computer software such as M-Box, IG or Galaxy.

G&J/N4201 **Dop the diamond**

National Occupational Standard

Unit Code	G&J/N4201
Unit Title (Task)	**Dop the diamond**
Description	This OS unit is about fixing rough diamond on dop or stage or die pin or mould using adhesives, as per the marking and for plotting the inclusions in a diamond

Scope	This unit/task covers the following:
	
	Receive the packet of rough diamonds from supervisor
	• Match specifications of the roughs such as shape, size, weight and quantity, as per those mentioned on the packet issued.
	• match with the photo of the rough, if provided
	
	Clean the rough surface prior to doping or fixing
	• clean diamond in 20% aqueous Sodium hydroxide (NaOH) solution heated to 100°C
	• clean diamond in double distilled water in ultrasonic cleaner at 70° C
	• dip diamond in Nitric Acid heated to 100°C and clean diamond in double distilled water in ultrasonic cleaner
	
	Fix or dop the rough diamond on the stage or pin
	• using vacuum pump and a quick glue (feviquick) fix the rough diamond on the stage/pin
	• dry the doped diamond using an oven or use a hand dryer
	• apply whitener on the surface of the rough prior to scanning
	
	Create a mould for IG
	• clean the diamond in pin after scanning
	• apply steam on the diamond
	• cover a holder pin with adhesive and sealant to create the mould
	• determine the mould size depending on the diamond size and the following condition: (a=distance from sides and bottom, b= distance from top)
	  ○ for diamond 6 – 10 ct, then a = 5 mm;
	  ○ for diamond 3 – 6 ct, then a = 4 mm;
	  ○ for diamond < 3 ct, then a = 3 mm;
	  ○ b = constant = 2 mm
	• cut mica piece for making bottom of mould with the required size
	• wear surgical hand gloves to avoid the finger-prints on mica
	• use acetone to clean the mica piece and glass
	• to make a mould, arrange four glass pieces in a cube with mica bottom
	• take a Teflon funnel and clean it in normal water and double distilled water in ultrasonic cleaner
	• measure a mould height, width and length using digital venire calipers. insert all the measured parameters including weight of the stone, in carat, into the immersion glass calculator to assess the required quantity of glass in grams
	• clean immersion glass using clean cloth and acetone

	• insert the diamond in mould while ensuring that its bottom face does not touch the bottom of mould and some part of pin remains inside mould • arrange the Teflon funnel and moulds in a stand • place the stand into the IG heater • open argon gas cylinder valve, set the bar pressure on the meter and adjust flow rate the on scale. • in the IG heater (furnace), introduce Argon gas to displace oxygen from the mould • on the furnace, set the temperature and allow all melted immersion glass to flow into the mould • dry the stand in vacuum drying oven • remove the mould after drying before the metal of the pin cracks • place the glass-diamond into a thermo box for controlled environment Clean the rough surface after removing from stage, pin or mould • remove diamond from pin • clean diamond in acetone and double distilled water in ultrasonic cleaner • dip diamond in Nitric Acid heated to 100°C and clean diamond in double distilled water in ultrasonic cleaner • use ethanol for further cleaning Perform quality check • check the alignment of the rough on the stage or pin Follow safety procedures at work • ensure that the door of the heater is closed after placing the fixed rough and before starting the machine • do not operate the machine while touching the rough • wear proper safety equipment such as gloves and eye glasses while working Report problems about: • mismatch in rough issued and received • problem with the planned sticking • unclear marking • defective or inadequate number of stages, holders or pins • inadequate quantity of consumable such as adhesives • machine break down or wear and tear of tools, etc.
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Quality of doping	To be competent, the user/individual on the job must be able to: PC1. accurately and securely fix rough as per the plotting technique PC2. accurately align and level the rough as per marking PC3. clean rough as instructed PC4. accurately create mould for IG as per the size of the rough

	PC5. ensure that there are no inclusion and cavities on the upside and downside of the fixed rough PC6. apply whitener properly
Productivity	To be competent, the user/individual on the job must be able to: PC7. achieve the productivity in terms of carats or number of pieces as set by the company PC8. timely delivery for further processing
Controlling defects	To be competent, the user/individual on the job must be able to: PC9. ensure no damage to the rough during fixing, removal or cleaning process PC10. follow safety procedures while creating a mould for IG PC11. avoid any finger prints on the mould
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: acceptable limits of weight loss; incentives; delivery standards; safety practices and hazards; security and performance measurement KA2. work flow involved in company's diamond processing process KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. issue return procedures followed by the company
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. basic characteristics of a diamond KB2. accurate fixing of roughs on dop/stage/mould as per plotting technique KB3. heat requirements such temperature, duration for different adhesives KB4. cleaning techniques of the rough using different chemicals and ultrasonic cleaner KB5. melting the immersion glass and mould making procedure for IG KB6. potential work hazards KB7. various tools and machined to be used for the fixing process, its hazards and maintenance KB8. use of magnifying camera with screen or an eye glass in order to check alignment
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Reading and writing skills**
	The user/individual on the job needs to know and understand how: SA1. to read the manuals for machines SA2. to read descriptions on the diamond packets/ bags SA3. to document work done for status and performance appraisal
	Calculation and measuring skills
	The user/individual on the job needs to know and understand how: SA4. to measure the size of the rough SA5. to decide the size of the mould required SA6. to calculate the amount of glass to be melted

	SA7. to set the heating requirement SA8. to measure the quantity of cleaning agent to be used SA9. to regulate the pressure SA10. to regulate the quantum of gas in the machine SA11. to read and understand the reading on different meters/scales
	Communication skills
	The user/individual on the job needs to know and understand how: SA12. to discuss task, schedules, and work-loads with co-workers and supervisors SA13. to understand instructions and report problems
	Teamwork and multitasking
	The user/individual on the job needs to know and understand how: SA14. to share work load as required SA15. to assist others who require help
B. Professional Skills	**Understanding the marking**
	The user/individual on the job needs to know and understand how: SB1. the rough needs to be fixed along the marking to achieve the plotting objective
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB2. to use different types of adhesives in different cases SB3. to work with different cleaning agents and tools like, tweezers, forceps, bowls, beakers, stage, Teflon funnel, immersion moulds, stands, tongs, etc. SB4. to work with different chemicals like ethanol, helium gad, argon gas, NaOH, acetone, mica, etc. SB5. to work with the Immersion heater, ultrasonic cleaner, hand held dryer and heating oven SB6. to maintain tools and machines used SB7. to work in a safe environment, i.e., without injuries
	Reducing loss and recycling
	The user/individual on the job needs to know and understand how: SB8. to handle diamonds with care SB9. to minimize damage or loss of any diamond during the doping process SB10. to recycle glass by process of re melting the glass on a fixed rough on to a new mould, to avoid wastage and promoting re use SB11. to suggest improvements in order to reduce loss
	Decision making
	The user/individual on the job needs to know and understand how: SB12. to make decisions pertaining to the order of fixing roughs in the pins/stage SB13. to decide the size required for the mould SB14. to choose the direction of fixing in case the marking is not provided

	Problem solving
	The user/individual on the job needs to know and understand how: SB15. to identify the factors such as quality of the glue, tools and machines used, that contribute to the fixing of roughs
	Critical thinking
	The user/individual on the job needs to know and understand how: SB16. to spot process disruptions and delays

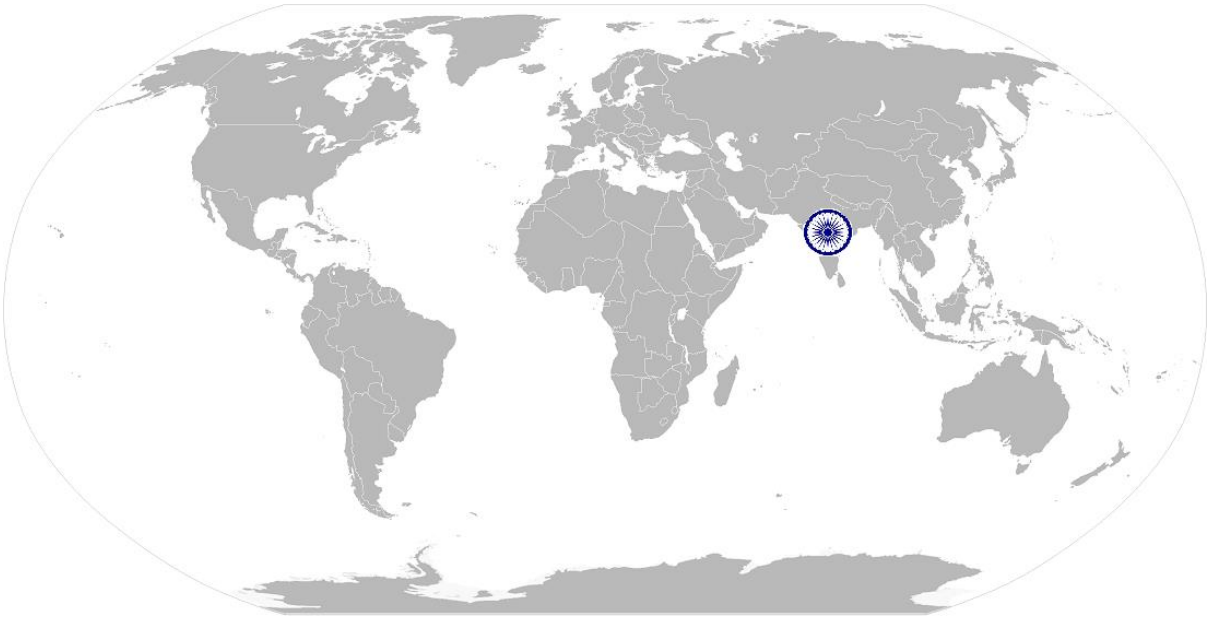
G&J/N4201 **Dop the diamond**

NOS Version Control

NOS Code	G&J/N4201		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Gems &Jewellery	Drafted on	10/06/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

G&J/N4203 **Plot the inclusions**

National Occupational Standard



Overview

This unit is about operating the plotting software or machine such as M-Box, IG or Galaxy in order to spot and plot inclusions in rough diamond – such as watery cracks, coloured bubbles, clouds, brown graining lines, VVS pinpoints – in order to help the planner in planning the optimum cut.

G&J/NN4203 **Plot the inclusions**

National Occupational Standard

Unit Code	**G&J/N4203**
Unit Title (Task)	**Plot the inclusions**
Description	This OS unit is about using manual or automatic technology to plot various inclusions in the rough on a computer model to help in planning
Scope	This unit/task covers the following: Collect the rough diamond from the supervisor • match specifications such as shape, size, dimensions, etc., and received as per those mentioned on the packet • match the photograph with the rough Prepare the rough for plotting • analyze the diamond and mark for fixing on the stage or die pin • ensure that there are no inclusion and cavities on the upside and downside • check the alignment of the fixed rough on the holder with respect to marking • once fixed on the pin, scan the model using a rough scanner (e.g., helium rough) • paint the rough using whitener to cover all surfaces • scan concave model on the rough scanning machine Plot the inclusions • M-Box: o place the stage in the m-box machine and scan the rough o using the zoom of the machine view the various inclusions from different angles on the rough o plot all the inclusions on the model of the rough using the plotting software on the computer o save and share the file • IG (Immersion Glass): o make cube model on the rough scanner, and match it with the rough model scanned o place the cube in the IG scanner machine and scan the rough o import 3D model of the diamond and the cube from helium scanner. also, load images of the IG cube taken on IG scanner o auto plot all visible inclusions o check the plotting using the 3D stereo o delete the inclusions outside the diamond model o add the inclusions which have been missed out by the machine o make any corrections that are necessary in the plotting o save and share the file • Galaxy: o unlike m-box and IG, galaxy works on Sarin technology, hence a rough model needs to be made using a Sarin scanner

	○ place the rough stage in the galaxy machine and scan the rough ○ auto plot all visible inclusions ○ view the scanning and plotting process on the screen ○ make note of the required data such as cycle time as per company's policy ○ check the plotting and make any changes if required using sarin advisor ○ save and share the file Check quality and return diamond • get the plotting checked by relevant authority before sharing on the computer network • make necessary changes as suggested • bag the plotted roughs and label as per the company's procedure • return to the supervisor for further processing Follow safety procedures at work • ensure that the door of the respective machine is closed after placing the fixed rough and before starting the machine • not to operate the machine while touching rough Report problems to Supervisor/reporting authority about: • difficulty in plotting • machine failures • reasons for anticipated delays that may adversely affect delivery
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Quality of Plotting	To be competent, the user/individual on the job must be able to: PC1. accurately mark rough for fixing PC2. accurately plot all inclusions, with no mistakes and need for re work PC3. accurately bag and label the roughs before returning
Operating the Plotting Machine and Software	To be competent, the user/individual on the job must be able to: PC4. accurately and securely place the dop / stage in the machine PC5. accurately scan the rough for plotting inclusions PC6. accurately download and share files on the server
Productivity	To be competent, the user/individual on the job must be able to: PC7. achieve the productivity in terms of carats or number of pieces as set by the company PC8. achieve timely delivery for further processing PC9. maintain cycle time
Controlling defects	To be competent, the user/individual on the job must be able to: PC10. detect the inclusions which are not marked automatically by the machine PC11. rectify any faulty plotting done by auto plotter PC12. accurately assess that the marking is correct for the plotting required PC13. minimize damage, weight loss and breakage

G&J/NN4203 **Plot the inclusions**

Multitasking	To be competent, the user/individual on the job must be able to: PC14. work of different and new technologies PC15. train others on plotting
Knowledge and Understanding (K)	
B. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on: acceptable limits of weight loss; incentives; delivery standards; safety practices and hazards; security and performance measurement KA2. work flow involved in company's diamond processing process KA3. importance of the individual's role in the workflow KA4. reporting structure KA5. issue return procedures followed by the company
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. 4Cs of a diamond and its characteristics KB1. marking and fixing of a rough KB2. laser mapping KB3. model making KB4. cavity mapping KB5. operating the M-Box, IG and Galaxy machines KB6. using the different plotting software used for Helium and Sarin technologies KB7. colour grading of a diamond KB8. different type of inclusions in a diamond KB9. spectrum operations KB10. potential work hazards KB11. computer operations KB12. file sharing on the server KB13. use of various scopes in diamond processing KB14. repair work
Skills (S) [Optional]	
C. Core Skills/ Generic Skills	**Reading and writing skills**
	The user/individual on the job needs to know and understand how: SA1. to read the manuals for operating machines and software SA2. to read descriptions on the diamond packets/ bags SA3. to enter data on the computer SA4. to document work done for status and performance appraisal
	Calculation and geometry skills
	The user/individual on the job needs to know and understand how: SA5. to identify and measure the dimensions such as size, shape of the inclusion to be plotted SA6. to identify the angle and the exact position of the inclusion SA7. to judge the extent of rotation, zoom and angling required to view the inclusion clearly

	Communication skills
	The user/individual on the job needs to know and understand how: SA8. to discuss task, schedules, and work-loads with co-workers and supervisors SA9. to understand instructions and report problems
	Teamwork and multitasking
	The user/individual on the job needs to know and understand how: SA10. to share work load as required SA11. to assist others who require help SA12. to train the helpers to learn plotting
D. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand how: SB1. to differentiate different type of inclusions, e.g. decide what is a cloud SB2. to decide which inclusions are important and must be plotted SB3. to use auto plotting for a particular stone, if manual is too time consuming SB4. to decide colour and clarity SB5. to make marking for fixing
	Using tools and machines
	The user/individual on the job needs to know and understand how: SB6. to work with computer, laser mapping machine, rough scanning, M-Box, IG scanner and Galaxy machine SB7. to maintain tools and machines used SB8. to work in a safe environment, i.e., without injuries
	Reducing loss
	The user/individual on the job needs to know and understand how: SB9. to handle diamonds with care SB10. to minimize damage or loss of any diamond during the plotting process SB11. to report diamond losses via documentation as per company policy SB12. to suggest improvements in order to reduce loss
	Analytical thinking
	The user/individual on the job needs to know and understand how: SB13. to assess accuracy of the marking for fixing and alignment of fixed rough SB14. to assess accuracy of plotting SB15. to identify solutions to avoid delays because of machine failure
	Reflective thinking
	The user/individual on the job needs to know and understand how: SB16. to work for long hours in a sitting position without health problems
	Problem solving
	The user/individual on the job needs to know and understand how: SB17. to rectify defects occurred in plotting
	Planning skills
	The user/individual on the job needs to know and understand how:

	SB18. to plan work for maximum productivity
	Innovative thinking
	The user/individual on the job needs to know and understand how: SB19. to devise new means of working to improve productivity SB20. to suggest different or innovative plans, which may yield higher returns for the company
	Critical thinking
	The user/individual on the job needs to know and understand how: SB21. to spot process disruptions and delays

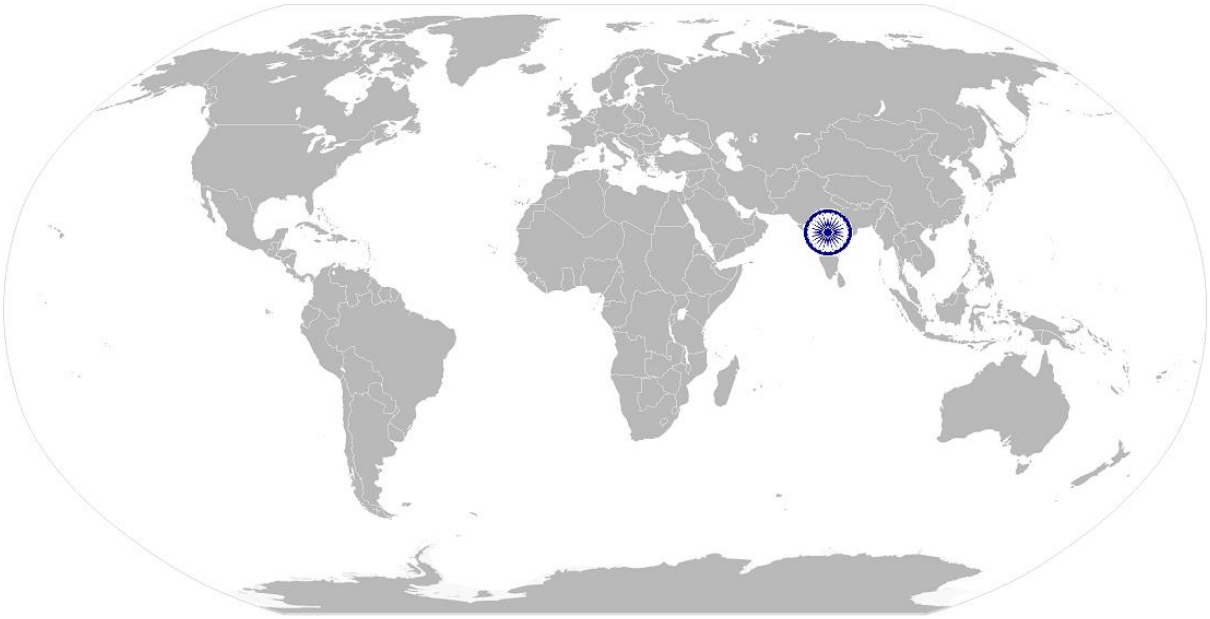
G&J/NN4203 **Plot the inclusions**

NOS Version Control

NOS Code	G&J/N4203		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Gems &Jewellery	Drafted on	10/06/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

G&J/N9930 **Maintain IPR**

National Occupational Standard



Overview

This unit is about and respecting intellectual property rights (IPR) of the company's products, policies, procedures and orders.

G&J/N9930 **Maintain IPR**

National Occupational Standard

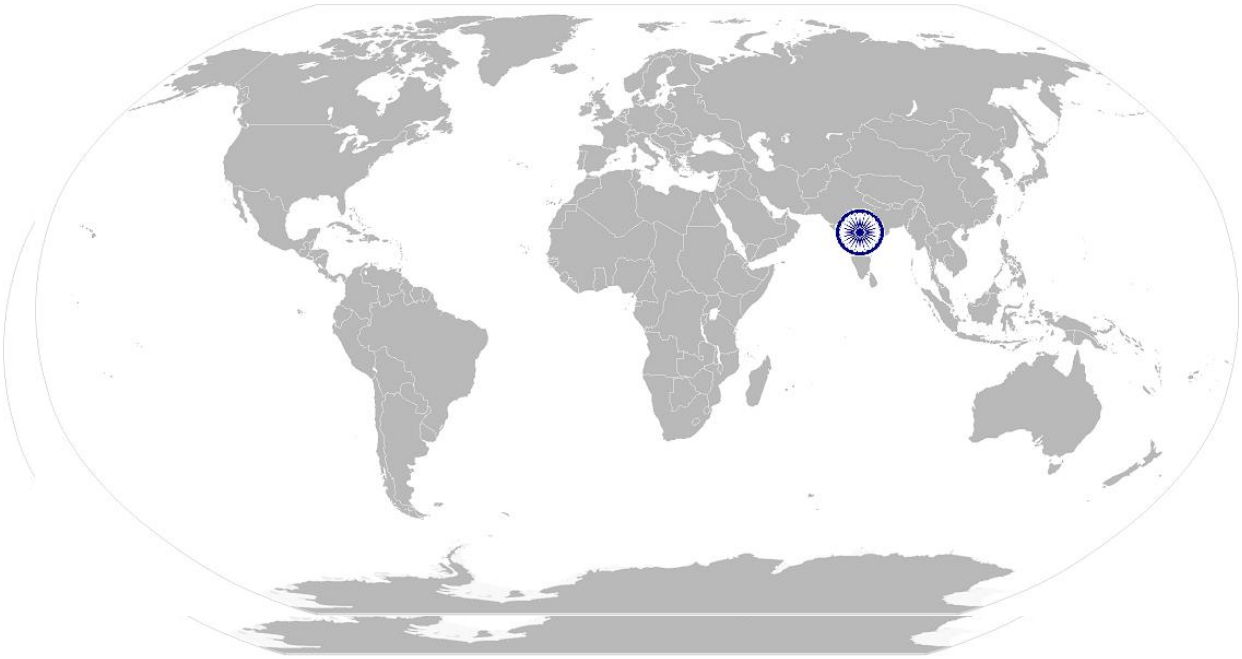
Unit Code	**G&J/N9930**
Unit Title (Task)	**Respect IPR of company**
Description	This OS unit is about maintaining company's intellectual property
Scope	This unit/task covers the following: Protect company's Intellectual Property Rights (IPR) • prevent leak of new orders to competitors by reporting on time • prevent leak of the manufacturing processes or the policies followed by the company • be aware of any of company's product patents • report IPR violations observed in the market, to supervisor or company heads
Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Respecting IPR	To be competent, the user/individual on the job must be able to: PC1. spot plagiarism and report PC2. understand rationale of patents and IPR PC3. avoid being involved in IPR violations
Knowledge and Understanding (K)	
A. Organizational Context	The individual on the job needs to know and understand: KA1. company's policies on IPR, plagiarism and order leaks KA2. company's patented products KA3. market trends and company's unique product range KA4. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. basics of patents and IPR laws KB2. how IPR protection is important for competitiveness of a company
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Communication skills**
	The user/individual on the job needs to know and understand how: SA1. to effectively communicate any observed IPR violations or leaks
B. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand when and how: SB2. to report sources of IPR violations
	Reflective thinking
	The user/individual on the job needs to know and understand how: SB3. to learn from past mistakes and report IPR violations on time
	Critical thinking
	The user/individual on the job needs to know and understand how: SB4. to spot signs of violations and alert authorities in time

NOS Version Control

NOS Code	G&J/N9930		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Gems &Jewellery	Drafted on	10/06/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

G&J/N9931 **Coordinate with team and superiors**

National Occupational Standard



Overview

This unit is about the work ethics, team work, and level of communication with colleagues or clients in the diamond processing industry. It determines the ability to work as a team member, share work and multi-task in order to achieve the required deliverables on schedule.

G&J/N9931 **Coordinate with team and superiors**

National Occupational Standard

Unit Code	**G&J/N9931**
Unit Title (Task)	**Interact with colleagues and seniors**
Description	This OS unit is about communicating with colleagues and seniors in order to maintain smooth ad hazards free work flow
Scope	This unit/task covers the following: Interact with supervisor to: • receive work instructions and raw materials from reporting supervisor • communicate to reporting supervisor about process flow improvements, product defects received from previous process, repairs and maintenance of tools and machinery as required • communicate any potential hazards or expected process disruptions • handover completed work to supervisor Interact with colleagues within and outside the department to: • work as a team with colleagues and share work as per their or own work load and skills • work with colleagues of other departments • communicate an discuss work flow related difficulties in order to find solutions with mutual agreement • receive feedback from QC and rework in order to complete work on time

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Interaction with supervisor	To be competent, the user/individual on the job must be able to: PC1. understand the work output requirements PC2. comply with company policy and rule PC3. deliver quality work on time as required by reporting any anticipated reasons for delays
Interactions with colleagues and other departments	To be competent, the user/individual on the job must be able to: PC4. put team over individual goals PC5. conflicts resolution and multi-tasking

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on personnel management KA2. work flow involved in company's diamond processing KA3. importance of the individual's role in the workflow KA4. reporting structure
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. how to communicate effectively KB2. how to build team coordination

G&J/N9931 **Coordinate with team and superiors**

Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Teamwork and some multitasking**
	The individual on the job needs to know and understand how: SA1. to share work load as required SA2. to deliver product to next work process on time
B. Professional Skills	**Decision making**
	The individual on the job needs to know and understand: SB1. how to report potential areas of disruptions to work process SB2. when to report to supervisor and when to deal with a colleague depending on the type of concern
	Reflective thinking
	The individual on the job needs to know and understand: SB3. how to improve work process
	Critical thinking
	The individual on the job needs to know and understand: SB4. how to spot process disruptions and delays

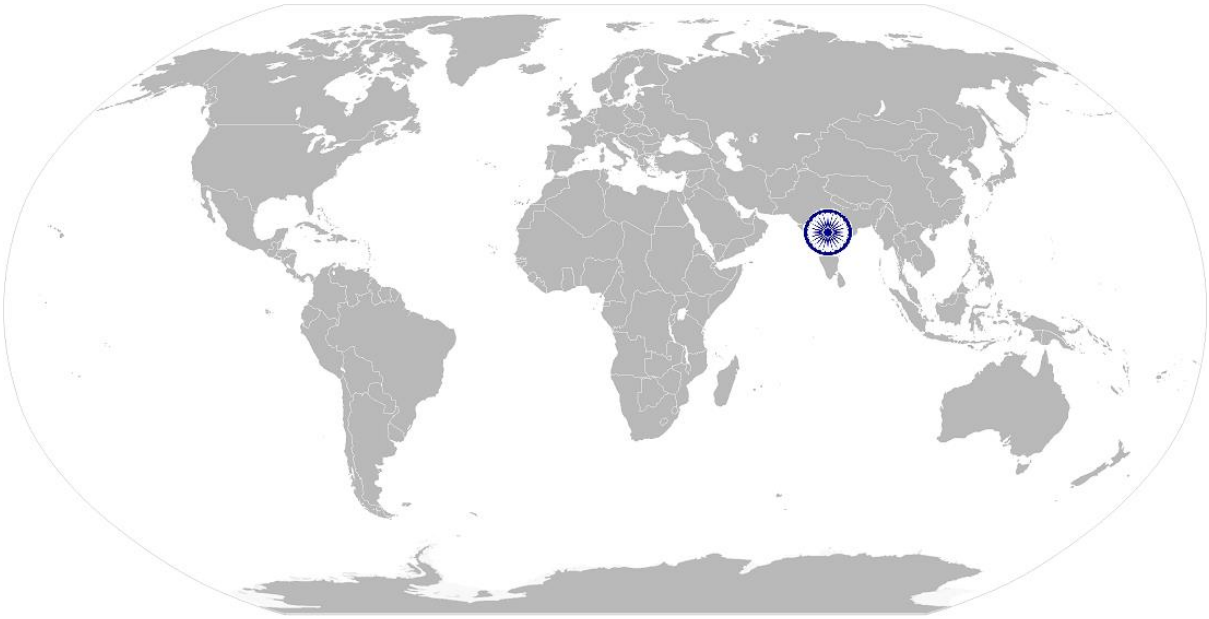
G&J/N9931 **Coordinate with team and superiors**

NOS Version Control

NOS Code	G&J/N9931		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Gems &Jewellery	Drafted on	10/06/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

G&J/N9933 **Maintain safety**

National Occupational Standard



Overview

This unit is about the worker's commitment towards reporting potential hazards and containing accidents in order to make the work environment safe for self and colleagues.

G&J/N9933 **Maintain safety**

National Occupational Standard

Unit Code	G&J/N9933
Unit Title (Task)	Maintain safety at work
Description	This OS unit is about being aware of and communicating potential hazards and dangers of accidents on the job
Scope	This unit/task covers the following: Understand potential sources of accidents • to avoid accidents related to use of potentially dangerous chemicals, gases, sharp tools and hazards from machines like rotating scaife, lasers, heating ovens, etc. Use safety gear to avoid accidents • wear safety gear such as goggles, mask, gloves , jacket , etc. as prescribed for the job Understand the safety procedures followed by the company • such as fire drills, emergency/ evacuation procedures, first aid, etc., which will be helpful in case of an emergency Communicate to reporting supervisor about: • process flow improvements to reduce anticipated or repetitive hazards • mishandling of tools, machines or hazardous materials • electrical problems that could result in accident

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding of potential sources of accidents and communicating	To be competent, the user/individual on the job must be able to: PC1. spot and report potential hazards on time PC2. follow company policy and rules regarding hazardous materials PC3. deliver quality work on time as required by reporting any anticipated reasons for delays
Using safety gear	To be competent, the user/individual on the job must be able to: PC4. understand which safety gear must we used for a particular task
Understanding of safety procedures	To be competent, the user/individual on the job must be able to: PC5. understand and follow the evacuation procedure properly during a fire drill PC6. provide first aid to self or others in case of emergency

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. company's policies on handling: harmful chemicals and sharp tools, safety and hazards of machines, fire safety/drill, first aid and, disposal of harmful chemicals and materials KA2. work flow involved in company's diamond processing KA3. importance of the individual's role in the workflow KA4. reporting structure

G&J/N9933 **Maintain safety**

B. Technical Knowledge	The individual on the job needs to know and understand: KB1. how different chemicals react and what could be the danger from them KB2. how to use machines and tools without causing bodily harm KB3. fire safety education KB4. first aid execution KB5. disposal of hazardous chemicals, tools and materials by following prescribed environmental norms or as per company policy
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	**Communication skills**
	The individual on the job needs to know and understand how: SA1. to effectively communicate the danger
B. Professional Skills	**Decision making**
	The individual on the job needs to know and understand: SB1. importance of reporting potential sources of danger SB2. appropriate actions to be taken in the event of an accident SB3. procedure for disposing of hazardous materials, safely and following environmental guidelines
	Reflective thinking
	The individual on the job needs to know and understand how: SB4. to learn from past mistakes regarding use of hazardous machines, tools or chemicals
	Critical thinking
	The individual on the job needs to know and understand: SB5. how to spot danger SB6. procedure to follow in the event of a fire or other hazard

NOS Version Control

NOS Code	G&J/N9933		
Credits(NVEQF/NVQF/NSQF) [*OPTIONAL*]	TBD	Version number	1.0
Industry	Gems &Jewellery	Drafted on	10/06/13
Industry Sub-sector	Diamond Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

Definitions

Keywords /Terms	Description
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or an area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-function	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (OS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding	Knowledge and understanding are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.
Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish

	specific designated responsibilities.
Core Skills/ Generic Skills	Core skills or generic skills are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.

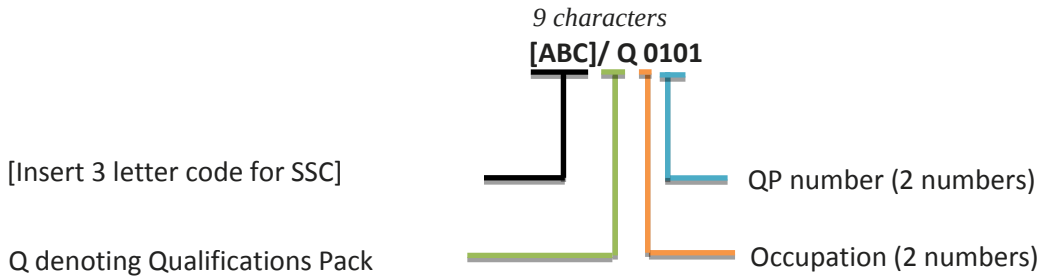
Acronyms

Keywords /Terms	Description
IPR	Intellectual Property Rights
NOS	National Occupational Standard(s)
NVQF	National Vocational Qualifications Framework
NSQF	National Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
QP	Qualifications Pack

Annexure

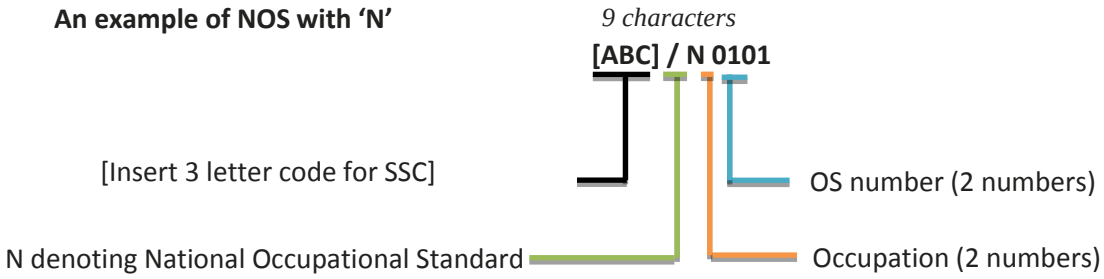
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



Back to top…

The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Handmade gold and gems-set jewellery	01-20
Cast and diamond-set jewellery	21-40
Diamond processing	41-60
Gemstone processing	61-80
Jewellery retailing	81-98

Sequence	Description	Example
Three letters	Industry name	G&J
Slash	/	/
Next letter	Whether **Q**P or **N**OS	Q
Next two numbers	Occupation code	42
Next two numbers	OS number	02

Job Role	CRITERIA FOR ASSESSMENT OF TRAINEES Inclusion Plotter
Qualification Pack	Diamond Processing - Inclusion Plotter
Sector Skill Council	GEMS & JEWELLERY

Assessment Strategy			Marks Allocation	
NOS	Elements	Performance Criteria	Theory	Practical
1. G&J/N4201Dop the diamond	Quality of doping	PC1. accurately and securely fix rough as per the plotting technique	0	2
		PC2. accurately align and level the rough as per marking	1	3
		PC3. clean rough as instructed	0	2
		PC4. accurately create mould for IG as per the size of the rough	1	4
		PC5. ensure that there are no inclusion and cavities on the upside and downside of the fixed rough	0	5
		PC6. apply whitener properly	0	2
	Productivity	PC7. achieve the productivity in terms of carats or number of pieces as set by the company	0	5
		PC8. timely delivery for further processing	0	3
	Controlling defects	PC9. ensure no damage to the rough during fixing, removal or cleaning process	0	3
		PC10. follow safety procedures while creating a mould for IG	1	2
		PC11. avoid any finger prints on the mould	0	2
		Sub Total	3	33
2. G&J/N4203 Plot the inclusions	Quality of Plotting	PC1. accurately mark rough for fixing	0	4
		PC2. accurately plot all inclusions, with no mistakes and need for re work	1	4
		PC3. accurately bag and label the roughs before returning	0	3
	Operating the Plotting Machine and Software	PC4. accurately and securely place the dop / stage in the machine	1	4
		PC5. accurately scan the rough for plotting inclusions	0	5
		PC6. accurately download and share files on the server	0	2

	Productivity	PC7. achieve the productivity in terms of carats or number of pieces as set by the company	0	5
		PC8. achieve timely delivery for further processing	1	2
		PC9. maintain cycle time	0	2
	Controlling defects	PC10. detect the inclusions which are not marked automatically by the machine	0	5
		PC11. rectify any faulty plotting done by auto plotter	0	3
		PC12. accurately assess that the marking is correct for the plotting required	0	2
		PC13. minimize damage, weight loss and breakage	0	3
	Multitasking	PC14. work of different and new technologies	1	0
		PC15. train others on plotting	1	0
		Sub Total	5	44
3.G&J/N9930 Maintain IPR	Respecting IPR	PC1. Spot plagiarism and report	1	0
		PC2. Understand rationale of patents and IPR	1	0
		PC3. Avoid being involved in IPR violations	1	0
		Sub Total	3	0
4. G&J/N9931 Coordinate with others	Interaction with supervisor	PC1. Understand the work output requirements	1	0
		PC2. Comply with company policy and rule	1	0
		PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays	0	2
	Interactions with colleagues and other departments	PC4. Put team over individual goals	1	0
		PC5. Conflicts resolution and multi-tasking	1	0
		Sub Total	4	2
5. G&J/N9934 Maintain safe work environment	Understanding of potential sources of accidents and communicating	PC1. Spot and report potential hazards on time	1	0
		PC2. Follow company policy and rules regarding hazardous materials	1	0
		PC3. Deliver quality work on time as required by reporting any anticipated reasons for delays	1	0
	Using safety gear	PC4. understand which safety gear must we used for a particular task	0	1
	Understanding of safety procedures	PC5. understand and follow the evacuation procedure properly during a fire drill	1	0
		PC6. provide first aid to self or others in case of emergency	1	0

		Sub Total	5	1
		Total	20	80
		Grand Total	100	