



QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR GEMS & JEWELLERY INDUSTRY



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Introduction

Qualifications Pack-Gemstone Rough Cutter

SECTOR: GEMS & JEWELLERY

SUB-SECTOR: Gemstone Processing

OCCUPATION: Rough Cutting

REFERENCE ID: G&J/Q6502

ALIGNED TO: NCO-2004/7313.55

Gemstone Rough Cutter: The rough cutter, also known as cutter or sawyer, cuts rough gemstones procured from mines or stone supplier as per the planning and marking given, in order to remove external impurities as well as inclusions if required and deliver scratch free stone for pre-shaping. It is the second stage of processing after assorting.

Brief Job Description: The individual works with hands on high-speed rotating blade or sawing machine in order to slice the stone for maximum yield and as per the client order received.

Personal Attributes: The job requires the individual to have: attention to details; good eyesight; steady hands; ability to work in a process driven team and for long hours in sitting position with a lot of patience and in a high-decibel machine-generated noise environment. The individual must avert machine failures, errors and avoid safety hazards.

What are Occupational Standards(OS)?

- Solution 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

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Qualifications Pack Code	G&J/Q6502			
Job Role	Gemstone Rough Cutter			
Credits(NVEQF/NVQF/NSQF)	TBD Version number 1.0			
Sector	Gems & Jewellery	Drafted on	31/05/13	
Sub-sector	Gemstone Processing	Last reviewed on	30/07/13	
Occupation	Gemstone Faceting	Next review date	15/07/15	

Job Role	Gemstone Rough Cutter Also called 'Cutter' or 'Sawyer'		
Role Description	Slicing rough gemstone into smaller pieces for further processing		
NVEQF/NVQF level	3		
Minimum Educational Qualifications Maximum Educational Qualifications	Preferably 10 th standard passed		
Training	Not applicable		
Experience	Not applicable		
Applicable National Occupational Standards (NOS)	Compulsory: 1. G&J/N6501 Cut rough gemstone 2. G&J/N9920 Maintain IPR at work 3. G&J/N9921 Coordinate with colleagues 4. G&J/N9924 Maintain safety at work Optional: Not applicable		
Performance Criteria	As described in the relevant OS units		

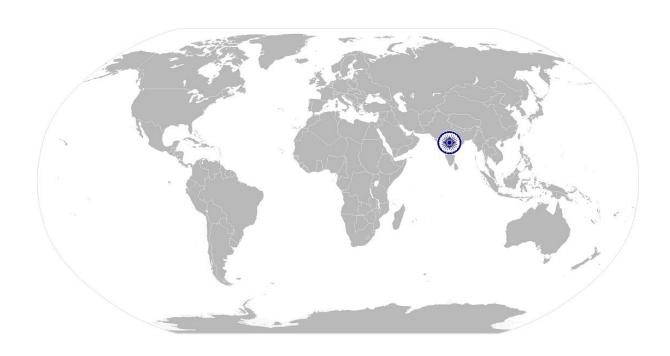






Cut rough gemstone

National Occupational Standard



Overview

This unit is about cutting the rough gemstone procured from mine or supplier as per planning and marking, in order to achieve maximum yield and customer's exact requirement. It is a crucial role in processing that determines the shape and weight of the gemstone, with or without inclusions. The rough may be a precious, semi-precious or synthetic stone.







Cut rough gemstone

Unit Code	G&J/N6501
Unit Title (Task)	Cut the rough gemstone procured from mine or supplier
Description	This OS unit is about slicing or cutting the rough gemstone either for fulfilling customer's specific requirement of shape and size or for maximising yield, with or without inclusions
Scope	







G&J/N6501	Cut rough gemstone				
 Interact with superior or polisher or QC department receive instructions and stones from reporting supervisor give feedback to supervisor on any specific stone handling requirement subsequent processes rework based on feedback from Quality Control department 					
Performance Criteria(I	PC) w.r.t. the Scope				
Element	Performance Criteria				
Cutting the rough gemstone	To be competent, the user/ individual on the job must be able to: PC1. cut stones cut within acceptable limits of weight loss PC2. accurately plan and mark for required shape, size and weight PC3. use correct blade or saw PC4. produce easy to shape cut stones in further processing PC5. achieve accurate calibration PC6. achieve maximum number of QC okayed stones				
Productivity	To be competent, the user/ individual on the job must be able to: PC7. achieve number and carats of stones cut per day against target given PC8. deliver scratch-less surface of cut stones PC9. maintain stone loss within prescribed limits, particularly, in precious stones				
Handling problems	To be competent, the user/ individual on the job must be able to: PC11. deliver cut stones in time by reporting problems faced or anticipated well in advance				
Knowledge and Under	rstanding (K)				
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: acceptable limits of stone loss, incentives, delivery standards, safety and hazards, integrity and IPR, and personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure				
B. Technical Knowledge	 The user/individual on the job needs to know and understand: KB1. basic Gemmology and properties of different types of stones KB2. different types of stones such as precious, semi-precious, synthetic KB3. Market value of stone to understand the rationale for different acceptable levels of stone loss KB4. origin of the stone, i.e., which mine, particularly, precious stones to read the softness/ hardness as developed from precedence of use KB5. which stone can be cabochon and which can be faceted? KB6. treatment of inclusions depending on the value of stone KB7. different types of saw and their use for a specific stone 				







G&J/N6501	Cut rough gemstone
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Skills (S) [Optional]	out rough genisione		
A. Core Skills/	Basic reading and writing skills		
Generic Skills	The user/ individual on the job needs to know and understand how to: SA1. read height, weight, dimensions of the stones facets as given on job sheets for planning and marking accordingly SA2. read company rules and compliance documents required to complete the work		
	Calculation and geometry skills		
	The user/individual on the job needs to know and understand how to: SA3. calculate stone loss at different stages of processing to determine the line of cut for a given shape, size and weight output SA4. plan for achieving the required symmetry on the finally processed stone		
	Teamwork and multi-tasking		
	The user/individual on the job needs to know and understand how to: SA5. share work load when multiple deliverables are required SA6. deliver the dop to next work process on time		
B. Professional Skills	Reading the design or plan for the stone		
	The user/individual on the job needs to know and understand how to: SB1. convert shape on paper into cut stone SB2. spot difficulties with respect to practicality of plan		
	Using tools and machines		
	The user/individual on the job needs to know and understand how: SB3. to read size of stone using vernier callipers SB4. to weigh the stone on weigh scale SB5. to use blade sawing machine SB6. to maintain the upkeep of the machine SB7. to use water jet and keep the stone cool and cutting oil for lubrication SB8. to work in a safe environment, i.e., without injuries		
Reducing stone loss			
	The user/individual on the job needs to know and understand how: SB9. to report stone losses via documentation as per company policy SB10. to minimise stone loss below the prescribed limits SB11. to report any incidents of high stone loss SB12. to follow company's policies on stone fragments SB13. to suggest improvements in order to reduce stone loss limits		
	Reflective thinking		
	The user/individual on the job needs to know and understand how to: SB14. improve work processes or greater productivity SB15. maintain good posture while working in a sitting position for long hours		







G&J/N6501 Cut rough gemstone

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Critical thinking		
	The user/individual on the job needs to know and understand how to:	
	SB16. spot process disruption and reasons for delay	







Cut rough gemstone

NOS Version Control

NOS Code	G&J/N6501		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	31/05/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
		Next review date	15/07/15

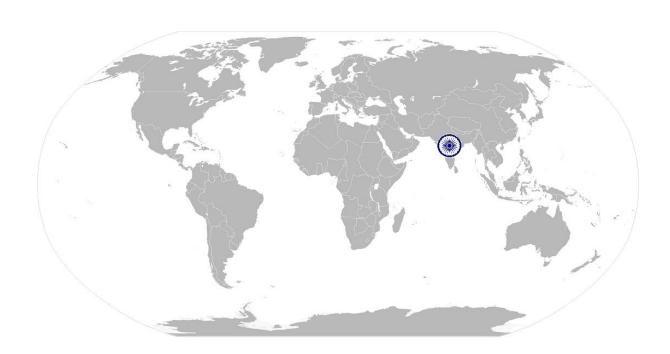






Maintain IPR at work

National Occupational Standard



Overview

This unit is about respecting intellectual property rights of the company's products and designs.



National Occupational Standards



G&J/N9920

Maintain IPR at work

Unit Code	G&J/N9920			
Unit Title (Task)	Maintain IPR of company			
Description	This OS unit is about protecting company's Intellectual Property Rights			
Scope	This unit/task covers the following:			
	Protect company's Intellectual Property Rights (IPR)			
	 to prevent leak of new designs/ plans to competitors by reporting on time to be aware of any of company's product, process or design patents 			
	 to be aware or any or company's product, process or design paterns to report IPR violations observed in the market, to supervisor or company 			
	heads			
Performance Criteria(P	C) w.r.t. the Scope			
Element	Performance Criteria			
Reducing stone loss	To be competent, the user/individual on the job must:			
and maintaining IPR	PC1. be aware of patents and IPR			
	PC2. not be involved in IPR violations			
Knowledge and Unders	tanding (K)			
A. Organizational	The user/individual on the job needs to know and understand:			
Context	KA1. company's policies on: integrity, IPR and personnel management			
	KA2. work flow involved in gemstone processing of company			
	KA3. importance of the individual's role in the organisation KA4. reporting structure			
	KA4. Teporting structure			
B. Technical The user/individual on the job needs to know and understand:				
Knowledge	KB1. patents and IPR laws			
	KB2. how IPR protection is important for competitiveness of a company			
	KB3. market trends			
Skills (S) [Optional]				
C. Core Skills/	Communication skills			
Generic Skills	The user/ individual on the job needs to know and understand how to:			
	SA1. effectively communicate any observed IPR violations or order leaks			
D. Professional Skills	Decision making			
	The user/individual on the job needs to know and understand:			
	SB1. when and how to report potential sources of violations			
	Reflective thinking			
	The user/individual on the job needs to know and understand how to:			
	SB2. learn from past mistakes and report IPR violations on time			







Maintain IPR at work

G&3/11/7/20	Maintain II K at Work		
	Critical thinking		
	The user/individual on the job needs to know and understand how to:		
	SB3. spot signs of violations and alert authorities in time		







Maintain IPR at work

NOS Version Control

NOS Code	G&J/N9920		
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0
Industry	Gems & Jewellery	Drafted on	31/05/13
Industry Sub-sector	Gemstone Processing	Last reviewed on	30/07/13
		Next review date	15/07/15



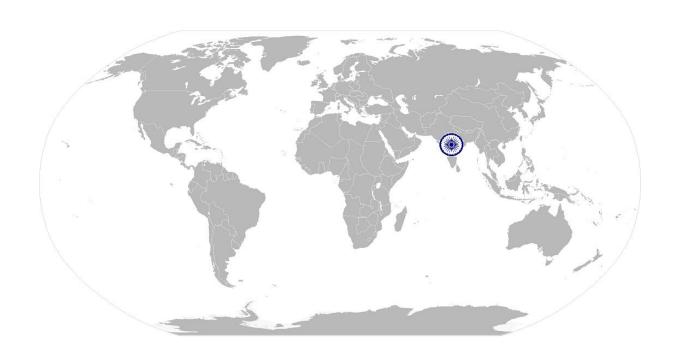






Coordinate with colleagues

National Occupational Standard



Overview

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







Coordinate with colleagues

Unit Code	G&J/N9921
Unit Title (Task)	Coordinate with colleagues and seniors
Description	This OS unit is about communicating with colleagues and seniors in order to achieve smooth and hazard-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
2	receive feedback from QC and rework in order to complete work on time
Performance Criteria(P	
Element	Performance Criteria
Interaction with supervisor	To be competent, the user/individual on the job must: 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	To be competent, the user/individual on the job must:
colleagues and other	PC4. put team over individual goals
departments	PC5. resolve conflicts and multi-task
Knowledge and Unders	tanding (K)
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure







G&J/N9921 Coordinate with colleagues

В.	Technical Knowledge	The user/individual on the job needs to know and understand how to: KB1. communicate effectively KB2. build team coordination
Sk	xills (S) [Optional]	
A.	Core Skills/ Generic Skills	Teamwork and multitasking The individual on the job needs to know and understand: SA1. importance of sharing work load as required SA2. significance of delivering product to next work process on time
В.	Professional Skills	Decision making The individual on the job needs to know and understand: SB1. potential areas of disruptions to work process and report the same SB2. when to report to supervisor and when to deal with a colleague individually, depending on the type of concern
		Reflective thinking The individual on the job needs to know and understand how to: SB3. improve work processes Critical thinking The individual on the job needs know and understand how to: SB4. spot process disruptions and delays







Coordinate with colleagues

NOS Version Control

NOS Code	G&J/N9921				
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0		
Industry	Gems & Jewellery	Drafted on	31/05/13		
Industry Sub-sector	Gemstone Processing Last reviewed on 30/07/13				
		Next review date	15/07/15		



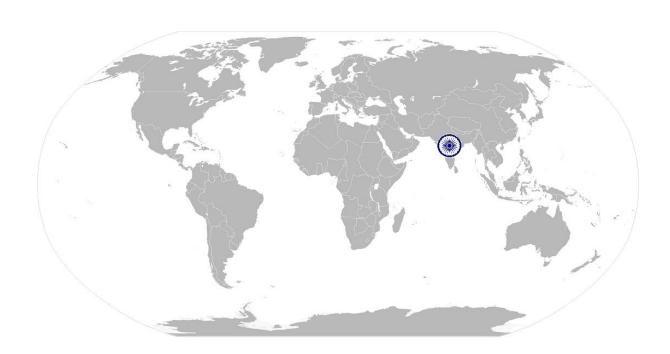






Maintain safety at work

National Occupational Standard



Overview

This unit is about commitment towards reporting potential hazards, taking preventive measures to contain accidents in order to make the work environment safe for self and colleagues and maintaining a clean working environment.







Maintain safety at work

Unit Code	G&J/N9924
Unit Title (Task)	Maintain safety at work
Description	This OS unit is about being aware of, communicating and taking steps towards minimizing potential hazards and dangers of accidents on the job and maintaining a clean work environment
Scope	This unit/task covers the following:
	 Understand potential sources of accidents to avoid accidents related to use of potentially dangerous chemicals, sharp tools, hazards from machines such as laser sawyer, heating lamps, rotating scaife and lap Use safety gear to avoid accidents wear safety gear such as goggles, mask, gloves, ear plugs
	Keep the work environment clean and organised
	keep the work station, machine, tools clean
	keep all the tools in an organised manner
	not litter or spit on work premises
	Communicate to reporting supervisor about: • process flow improvements that can reduce anticipated or repetitive hazards • mishandling of tools, machines or hazardous materials
	electrical problems that could result in accident
Performance Criteria(P	C) w.r.t. the Scope
Element	Performance Criteria
Communicating potential accident points	To be competent, the user/individual on the job must: PC1. spot and report potential hazards on time PC2. follow company policy and rules regarding use of 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: PC4. use or wear safety gear as per the rules of the company
Cleanliness and hygiene	To be competent, the user/individual on the job must: PC5. clean the work station PC6. organise tools and equipment in use







Maintain safety at work

Knowledge and Unders	standing (K)
A. Organizational Context	The user/individual on the job needs to know and understand: KA1. company's policies on: stone collection, safety and hazards and personnel management KA2. work flow involved in gemstone processing of company KA3. importance of the individual's role in the workflow KA4. reporting structure
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. how different chemicals react and the danger involved KB2. how to use machines and tools without suffering bodily harm
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	Communication skills The individual on the job needs to know and understand how to: SA1. effectively communicate the danger
	Organising skills
	The individual on the job needs to know and understand how to: SA2. keep all the tools in an organised manner so as to find them quickly SA3. keep the work environment clean
B. Professional Skills	Decision making
	The individual on the job needs to know and understand how to: SB1. report potential sources of danger SB2. follow prescribed procedure in the event of an accident SB3. avoid an accident by wearing appropriate safety gear
	Reflective thinking
	The individual on the job needs to know and understand how to: SB4. learn from past mistakes regarding use of hazardous machines or chemicals
	Critical thinking
	The individual on the job needs to know and understand how to: SB5. spot dangers SB6. organise tools so as the work process is smooth
	Decision making
	The individual on the job needs to know and understand how to: SB7. report potential sources of danger SB8. follow prescribed procedure in the event of an accident
	L







Maintain safety at work

NOS Version Control

NOS Code	G&J/N9924				
Credits(NVEQF/NVQF/NSQF)	TBD	Version number	1.0		
Industry	Gems & Jewellery	Drafted on	31/05/13		
Industry Sub-sector	Gemstone Processing Last reviewed on 30/07/13				
		Next review date	15/07/15		





Keywords /Terms	Description			
Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defied 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	Core skills or generic skills are a group of skills that are the key to learning			





Skills	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.		
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		

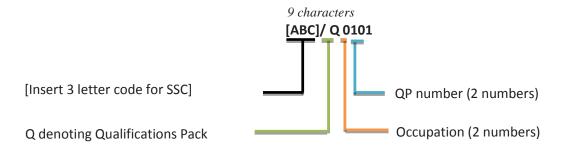




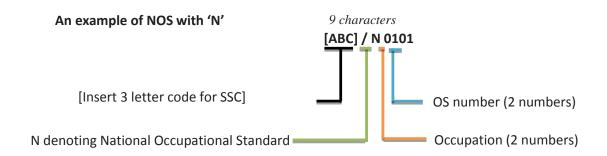
Annexure

Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard



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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	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01





Qualification Pack



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Gemstone Rough Cutter

Gemstone Rough Cutter

Sector Skill Council

Gems & Jewellery

To pass the Assessment, a candidate needs to score 50% in Theory and 70% in Practical

Assessment Strategy			Marks Allocation		
NOS	Elements	Performance Criteria	Total	Theory	Practical
		PC1. cut stones cut within acceptable limits of weight loss	10	2	8
		PC2. accurately plan and mark for required shape, size and weight	10	2	8
	Cutting the rough gemstone	PC3. use correct blade or saw	10	2	8
		PC4. produce easy to shape cut stones in further processing	10	2	8
4 00 1/110=04 0 .		PC5. achieve accurate calibration	10	2	8
G&J/N6501 Cut rough gemstone		PC6. achieve maximum number of QC okayed stones	5	0	5
		PC7. achieve number and carats of stones cut per day		·	
		against target given	5	0	5
	Productivity	PC8. deliver scratch-less surface of cut stones	5	0	5
		PC9. maintain stone loss within prescribed limits, particularly, in precious stones	5	0	5
	Handling problems	PC11. deliver cut stones in time by reporting problems faced or anticipated well in advance	5	0	5
			75	10	65
	Reducing stone loss and maintaining IPR	PC1. be aware of patents and IPR	2	2	0
2. G&J/N9920 Maintain IPR at work		PC2. not be involved in IPR violations	1	1	0
			3	3	0
		PC1. understand the work output requirements	4	0	4
	Interaction with supervisor	PC2. comply with company policy and rule	1	1	0
3. G&J/N9921 Coordinate with others		PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	3	0	3
	Interactions with collegeues and	PC4. put team over individual goals	1	1	0
	Interactions with colleagues and othedepartments	PC5. resolve conflicts and multi-task	1	1	0
		1 CO. 1000110 COMMICES AND MIGHT LASIN	10	3	7



Sector Skill Council



	Communicating potential accident points	PC1. spot and report potential hazards on time	1	1	0
		PC2. follow company policy and rules regarding use of			
		hazardous materials	3	1	2
	points	PC3. deliver quality work on time as required by			_
4. G&J/N9924 Maintain safe work environment		reporting any anticipated reasons for delays	1	1	0
	Using safety gear	PC4. use or wear safety gear as per the rules of the			1
		company	3	1	2
	Cleanliness and hygiene	PC5. clean the work station	2	0	2
		PC6. organise tools and equipment in use	2	0	2
			12	4	8
		Total		20	80
		Grand Total		100	

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Gemstone Rough Cutter

Qualification Pack Gemstone Rough Cutter

Gems & Jewellery

To pass the Assessment, a candidate needs to score 50% in Theory and 70% in Practical

Assessment Strategy			Marks Allocation		
NOS	Elements	Performance Criteria	Total	Theory	Practical
1. G&J/N6501 Cut rough gemstone	Cutting the rough gemstone	PC1. cut stones cut within acceptable limits of weight loss	10	2	8
		PC2. accurately plan and mark for required shape, size and weight	10	2	8
		PC3. use correct blade or saw	10	2	8
		PC4. produce easy to shape cut stones in further processing	10	2	8
		PC5. achieve accurate calibration	10	2	8
		PC6. achieve maximum number of QC okayed stones	5	0	5
	Productivity	PC7. achieve number and carats of stones cut per day against target given	5	0	5
		PC8. deliver scratch-less surface of cut stones	5	0	5
		PC9. maintain stone loss within prescribed limits,	5	0	5
	Handling problems	particularly, in precious stones PC11. deliver cut stones in time by reporting problems	5	0	5







		faced or anticipated well in advance			i .
			75	10	65
2. G&J/N9920 Maintain IPR at work	Reducing stone loss and maintaining IPR	PC1. be aware of patents and IPR	2	2	0
		PC2. not be involved in IPR violations	1	1	0
			3	3	0
3. G&J/N9921 Coordinate with others	Interaction with supervisor	PC1. understand the work output requirements	4	0	4
		PC2. comply with company policy and rule	1	1	0
	Interdesion with expervisor	PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	3	0	3
	Interactions with colleagues and	PC4. put team over individual goals	1	1	0
	othedepartments	PC5. resolve conflicts and multi-task	1	1	0
			10	3	7
4. G&J/N9924 Maintain safe work environment	Communicating potential accident points	PC1. spot and report potential hazards on time	1	1	0
		PC2. follow company policy and rules regarding use of hazardous materials	3	1	2
	points	PC3. deliver quality work on time as required by reporting any anticipated reasons for delays	1	1	0
	Using safety gear	PC4. use or wear safety gear as per the rules of the company	3	1	2
	Cleanliness and hygiens	PC5. clean the work station	2	0	2
	Cleanliness and hygiene	PC6. organise tools and equipment in use	2	0	2
			12	4	8
		Total		20	80
		Grand Total	100		