



# Jewellery Frame and Component Maker

QP Code: G&J/Q0611

Version: 2.0

NSQF Level: 3

GJSCI || Gem Jewellery Skill Council of India, 4th Floor, Business Facilitation Centre, SEEPZ SEZ,  
Andheri (E)  
Mumbai 400096 || email:standards.qa.content@gjsci.org

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## **G&J/Q0611: Jewellery Frame and Component Maker**

### **Brief Job Description**

The individual works with machine and hand tools to create components such as balls, wire, strips, chains etc. and frames from precious metal as per the design of jewellery pieces and articles. The artisan also assembles both components and frames for making complete final jewellery or article.

### **Personal Attributes**

The job requires the individual to have precision and excellent craftsmanship, attention to details, good eyesight, visualization and steady grip. The individual is expected to have integrity.

### **Applicable National Occupational Standards (NOS)**

#### **Compulsory NOS:**

1. [G&J/N0601: Draw wire, roll sheet, and thick wire from precious metal](#)
2. [G&J/N0611: Make various jewellery components](#)
3. [G&J/N0610: Make the jewellery frame](#)
4. [G&J/N9949: Follow material and energy conservation practices at workplace](#)
5. [G&J/N9902: Maintain health and safety at workplace](#)
6. [DGT/VSQ/N0101: Employability Skills \(30 Hours\)](#)

### **Qualification Pack (QP) Parameters**

<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	
<b>Occupation</b>	Gold smithy (Basic), Component Making/Filling/Assembling
<b>Country</b>	India
<b>NSQF Level</b>	3
<b>Credits</b>	16

<b>Aligned to NCO/ISCO/ISIC Code</b>	NCO-2015/ 7313.0703
<b>Minimum Educational Qualification &amp; Experience</b>	9th Class with NA of experience OR 8th Class with 1 Year of experience relevant experience OR Previous relevant Qualification of NSQF Level with 1 Year of experience relevant experience
<b>Minimum Level of Education for Training in School</b>	
<b>Pre-Requisite License or Training</b>	NA
<b>Minimum Job Entry Age</b>	18 Years
<b>Last Reviewed On</b>	NA
<b>Next Review Date</b>	30/04/2025
<b>Deactivation Date</b>	03/05/2025
<b>NSQC Approval Date</b>	17/11/2022
<b>Version</b>	2.0
<b>Reference code on NQR</b>	2022/GJ/GJSCI/06722
<b>NQR Version</b>	2

**Remarks:**

## G&J/N0601: Draw wire, roll sheet, and thick wire from precious metal

### Description

This OS unit is about drawing a wire or rolling a sheet from ingot or bar, which are used for making different jewellery pieces.

### Scope

The scope covers the following :

- Preparing raw materials, consumables and tools for rolling and drawing process
- Rolling a sheet and thick wire from precious metal
- Drawing a thin wire from precious metal using drawbench
- Achieving productivity

### Elements and Performance Criteria

#### *Preparing raw materials, consumables and tools for rolling and drawing process*

To be competent, the user/individual on the job must be able to:

- PC1.** determine the quantity and weight of required raw material like ingot, a bar etc., of precious metal or alloy
- PC2.** select appropriate consumables and tools like cutter, files, hammer, sandpaper etc.,
- PC3.** ensure the proper working condition of the tools, equipment and machines like a rolling mill, drawing plate, drawing bench etc., before starting the process

#### *Rolling a sheet and a thick wire from precious metal*

To be competent, the user/individual on the job must be able to:

- PC4.** hammer, anneal, pickle, rinse the ingot before carrying out rolling on a rolling machine
- PC5.** check rollers for any debris or excess oil causing slippage and for parallel roller alignment
- PC6.** set appropriate width or gap between rollers of roller machine using handle before every pass to achieve the required sheet or wire thickness
- PC7.** ensure the sheet is fed straight to the rolls to avoid the formation of crescent-shaped edges
- PC8.** ensure textured material is fed properly along with sheet in case of textured roller printing
- PC9.** ensure the wire is fed in the square grooves and turned 90 degrees each time or pass to get the correct shape and prevent unwanted flange
- PC10.** check the thickness of sheet or wire using vernier calliper or gauges after every pass
- PC11.** anneal rolled sheet or wire at regular intervals to avoid cracking or flaking, uneven elongation causing swept or rockered sheet etc.,
- PC12.** inspect the rolled sheet for any uneven thickness due to crowning of rollers, roll marks, rolled in scale and kinks etc.,
- PC13.** inspect the rolled wire for any grooves, chatter marks etc.,
- PC14.** accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)
- PC15.** maintain a proper log for metal loss, preventive maintenance etc.,

**PC16.** carry out oiling, cleaning of the rollers and rolling machines or mills etc., at regular intervals as per schedule

*Drawing a thin wire from precious metal using draw bench*

To be competent, the user/individual on the job must be able to:

**PC17.** anneal rolled thick wire of hexagonal or square cross-section

**PC18.** prepare the wire for drawing by filing one end to form a tapered shape

**PC19.** ensure the wire is properly lubricated to reduce excessive friction while drawing at the draw cone

**PC20.** pull or draw the wire fixed on drawing bench through the hole on draw plate of required different cross-section or shape using tongs

**PC21.** check thickness or diameter of the wire using wire gauges after every drawing pass

**PC22.** anneal wire at regular intervals or passes to avoid cracking or wrapping of wire

**PC23.** inspect the rolled wire for appropriate final shape and size or defects like the formation of fins, scales etc.,

**PC24.** accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)

**PC25.** carry out oiling, cleaning of the draw plates at regular intervals as per schedule

*Achieving productivity*

To be competent, the user/individual on the job must be able to:

**PC26.** draw wire or roll sheets per day against the target given

**PC27.** ensure timely delivery of the wires and the sheets to enable the commencement of various component making processes

**PC28.** update the supervisor on the work completion status at the end of shift

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

**KU1.** company's policies on acceptable limits of quality, delivery standards, safety practices and hazard, security and performance measurements of jewellery products

**KU2.** importance of non-disclosure of "confidential information" provided by the company

**KU3.** work flow involved in the jewellery manufacturing process of the company

**KU4.** importance of the individual's role in the workflow

**KU5.** the reporting structures

**KU6.** physical and chemical properties of various precious metal or alloy

**KU7.** the nature of deformation, elastic or plastic deformation and its effect on the metal grain structure, age-hardening, rolling and drawing ratio etc.,

**KU8.** how to troubleshoot the problems encountered during the rolling and drawing process

**KU9.** different types of rolling mills, drawing bench or machines

**KU10.** different types of draw plates like draw plates with different cross-section, adjustable drawplates, rough diamond drawplates etc.,

**KU11.** use of different types of tools such as draw plates, pliers, hammer, cup burrs, bench block, swage block, cutter, ruler etc. used during wire drawing and rolling

- KU12.** the various processes like annealing, pickling, air and water quenching
- KU13.** different rolling techniques like broadside or cross rolling, skin rolling, texture and pattern transfer by rolling etc.,
- KU14.** different kinds of rolling defects like bananaing, overdraft and under the draft, cobbling, crowing etc.,
- KU15.** different kinds of drawing defects like cracking, orange-peel etc.,
- KU16.** how to use the gauges and measuring tools appropriately like vernier calliper, wire gauge, ring sizer, bangle sizer etc.,
- KU17.** use of different types of tools used for cleaning and inspection like 10X loupe, 5X optivisor, burrs etc.,
- KU18.** use of different types of machines and tools in processes like stamping, ball making, tube making, chain making etc.,
- KU19.** maintenance of various machines, tools and equipment
- KU20.** potential work hazards, particularly, when using hand and machine tools as well as acids

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** fill up requisition slip for tools and materials required
- GS2.** read job sheets, company rules and compliance documents etc.,
- GS3.** communicate effectively with supervisors
- GS4.** organize required toolkit at the work bench for better time management
- GS5.** improvise upon the efficiency based on past work experience and guidance from supervisor



## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparing raw materials, consumables and tools for rolling and drawing process</i>	<b>3</b>	<b>6</b>	-	-
<b>PC1.</b> determine the quantity and weight of required raw material like ingot, a bar etc., of precious metal or alloy	1	2	-	-
<b>PC2.</b> select appropriate consumables and tools like cutter, files, hammer, sandpaper etc.,	1	2	-	-
<b>PC3.</b> ensure the proper working condition of the tools, equipment and machines like a rolling mill, drawing plate, drawing bench etc., before starting the process	1	2	-	-
<i>Rolling a sheet and a thick wire from precious metal</i>	<b>16</b>	<b>32</b>	-	-
<b>PC4.</b> hammer, anneal, pickle, rinse the ingot before carrying out rolling on a rolling machine	1	2	-	-
<b>PC5.</b> check rollers for any debris or excess oil causing slippage and for parallel roller alignment	1	2	-	-
<b>PC6.</b> set appropriate width or gap between rollers of roller machine using handle before every pass to achieve the required sheet or wire thickness	1	2	-	-
<b>PC7.</b> ensure the sheet is fed straight to the rolls to avoid the formation of crescent-shaped edges	1	2	-	-
<b>PC8.</b> ensure textured material is fed properly along with sheet in case of textured roller printing	2	5	-	-
<b>PC9.</b> ensure the wire is fed in the square grooves and turned 90 degrees each time or pass to get the correct shape and prevent unwanted flange	1	2	-	-
<b>PC10.</b> check the thickness of sheet or wire using vernier calliper or gauges after every pass	1	2	-	-
<b>PC11.</b> anneal rolled sheet or wire at regular intervals to avoid cracking or flaking, uneven elongation causing swept or rockered sheet etc.,	1	2	-	-



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC12.</b> inspect the rolled sheet for any uneven thickness due to crowning of rollers, roll marks, rolled in scale and kinks etc.,	2	4	-	-
<b>PC13.</b> inspect the rolled wire for any grooves, chatter marks etc.,	2	4	-	-
<b>PC14.</b> accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)	1	2	-	-
<b>PC15.</b> maintain a proper log for metal loss, preventive maintenance etc.,	1	1	-	-
<b>PC16.</b> carry out oiling, cleaning of the rollers and rolling machines or mills etc., at regular intervals as per schedule	1	2	-	-
<i>Drawing a thin wire from precious metal using draw bench</i>	<b>10</b>	<b>20</b>	-	-
<b>PC17.</b> anneal rolled thick wire of hexagonal or square cross-section	1	2	-	-
<b>PC18.</b> prepare the wire for drawing by filing one end to form a tapered shape	1	2	-	-
<b>PC19.</b> ensure the wire is properly lubricated to reduce excessive friction while drawing at the draw cone	1	2	-	-
<b>PC20.</b> pull or draw the wire fixed on drawing bench through the hole on draw plate of required different cross-section or shape using tongs	1	2	-	-
<b>PC21.</b> check thickness or diameter of the wire using wire gauges after every drawing pass	1	2	-	-
<b>PC22.</b> anneal wire at regular intervals or passes to avoid cracking or wrapping of wire	1	2	-	-
<b>PC23.</b> inspect the rolled wire for appropriate final shape and size or defects like the formation of fins, scales etc.,	2	4	-	-
<b>PC24.</b> accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC25.</b> carry out oiling, cleaning of the draw plates at regular intervals as per schedule	1	2	-	-
<i>Achieving productivity</i>	<b>3</b>	<b>6</b>	-	-
<b>PC26.</b> draw wire or roll sheets per day against the target given	1	2	-	-
<b>PC27.</b> ensure timely delivery of the wires and the sheets to enable the commencement of various component making processes	1	2	-	-
<b>PC28.</b> update the supervisor on the work completion status at the end of shift	1	2	-	-
<b>NOS Total</b>	<b>32</b>	<b>64</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	G&J/N0601
<b>NOS Name</b>	Draw wire, roll sheet, and thick wire from precious metal
<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	Handmade Gold and Gems-set Jewellery, Silver Smithing
<b>Occupation</b>	Gold smithy (Basic), Component Making/Filling/Assembling
<b>NSQF Level</b>	3
<b>Credits</b>	3
<b>Version</b>	4.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## **G&J/N0611: Make various jewellery components**

### **Description**

This OS unit is about making various jewellery components which are then assembled with the frame to make the complete jewellery

### **Scope**

The scope covers the following :

- Preparing raw materials, consumables and tools for various component making processes
- Making a round tube
- Making balls
- Making grains or rawa
- Making filigree wires
- Making collets
- Making a box clasp
- Stamping patterns on precious metal sheet
- Making a simple chain
- Achieving productivity
- Achieving quality standards

### **Elements and Performance Criteria**

#### *Preparing raw materials, consumables and tools for various component making processes*

To be competent, the user/individual on the job must be able to:

- PC1.** determine the quantity and weight of required raw material like rolled sheets, drawn wires of precious metal or alloy etc.,
- PC2.** select the appropriate tools and consumables like files, hammer, ingot mould, sand paper etc.,
- PC3.** prepare the tools, equipment and machines for component making processes

#### *Making a round tube*

To be competent, the user/individual on the job must be able to:

- PC4.** cut the rolled sheet at one end to taper shape
- PC5.** calculate the width of the strip to get the final diameter and thickness of a tube
- PC6.** put the strip in a swage block and bend it approximately in round shape using an appropriate mandrel
- PC7.** bend strip using a thinner and thinner mandrel until the two sides meet
- PC8.** draw the formed or bent strip through a drawplate to get the sides closed
- PC9.** anneal the drawn tube
- PC10.** draw the tube through a smaller hole on drawplate to get the sides closed further
- PC11.** bind the binding wire around the tube to get a proper seam
- PC12.** place soldering chips, flux on the seam
- PC13.** solder, clean the tube and file it to remove any excess solder

**PC14.** solder piece of wire of smaller diameter at one open end of the tube for drawing

#### *Making balls*

To be competent, the user/individual on the job must be able to:

- PC15.** prepare clean and filed flat metal sheet of required thickness as mentioned on the job sheet
- PC16.** cut the sheets in the required shape and size using jewellers saw or saw blade
- PC17.** choose the appropriate size of dapping block or cube and punches depending on the size of sheet and kind of metal
- PC18.** set annealed disk into a large dent or depression of dapping block and get hemispherical shape by hammering dapping punches
- PC19.** carry out punching in different dents or successively in smaller dents to achieve the final size or diameter of hemisphere or domes
- PC20.** ensure the proper thickness is maintained during punching stages
- PC21.** inspect the domes for any defects like extra metal or crack
- PC22.** solder two properly filed domes to get a complete ball shape
- PC23.** clean the soldered ball in a pickling bath
- PC24.** file and buff the balls to get final finish
- PC25.** carry out oiling, cleaning of the dapping block, dapping punches regularly

#### *Making grains or rawa*

To be competent, the user/individual on the job must be able to:

- PC26.** roll a very thin metal sheet of high karat gold and/or silver alloys
- PC27.** scissor narrow fringes along the edge and trim off fringe to get many small squares or platelets of metal
- PC28.** coil thin wire around a thin mandrel and cut into very small jump rings
- PC29.** coat the metal platelets or jump rings with charcoal powder to prevent them from sticking together during firing
- PC30.** place all the coated metal bits in a crucible covered with charcoal powder and fire in a kiln or oven
- PC31.** quench and clean granules using pickling bath and water
- PC32.** sort the granules of different sizes manually or using sieves

#### *Making filigree wires*

To be competent, the user/individual on the job must be able to:

- PC33.** interpret design which is drawn to 1:1 scale on paper
- PC34.** draw or roll pre-rolled thick wire to smaller required size or gauge
- PC35.** anneal and rinse the wire
- PC36.** straighten the wire using bench vice and hand vice
- PC37.** twist two wires using a hand tool or hand drill
- PC38.** flatten round frame wire or twisted filler wire or textured wire using an anvil and flat planishing hammer or pulling through fixed rolls
- PC39.** shape the frame or inner filler wires on a design using hand, shaping tools like pliers, tweezers and cutting tools like nippers or cold chisels
- PC40.** solder the frame wires to form the outer jacket
- PC41.** fill up the inner filler wires inside the frame wires

**PC42.** solder the whole assembly of frame and filler wires

**PC43.** clean the assembly using an acid bath and water

#### *Making collets*

To be competent, the user/individual on the job must be able to:

**PC44.** make jump rings of different sizes by turning a wire around the bottom portion or pavilion of the stone for making prong collet with wire

**PC45.** place a cross wire between the two jump rings and solder them to form prong collet

**PC46.** cut overlapped middle portion of the cross wire and finish using files

**PC47.** bend the cross wire ends to form prongs and solder with jump rings

**PC48.** trim and file extra prong tips before final stone setting

**PC49.** anneal and curve strip around the stone for making bezel collet

**PC50.** cut and solder strip ends to form a small ring-like shape

**PC51.** solder the joined strip to the flat sheet to form bezel collet for cabochon stones

**PC52.** file and taper bezel collet using conning block depending on stone shape before final stone setting

#### *Making a box clasp*

To be competent, the user/individual on the job must be able to:

**PC53.** file a measured size of sheet and scribe marks for bending

**PC54.** cut a small square hole along the edge of the sheet for trigger fitment

**PC55.** score the marks bit deeper by sawing and then with a small triangular file

**PC56.** file edges to get beveling before creasing the sheet

**PC57.** bend the sheet at scored marks to form a rectangular box or housing

**PC58.** solder edges and clean the housing

**PC59.** prepare another measured length sheet for making tongue, which would push-fit inside the housing

**PC60.** bend the sheet using planishing hammer and anvil and file edges to get the correct fit inside the housing

**PC61.** solder a sheet and close the housing box keeping one end open for the tongue

**PC62.** prepare measured size of end plate and trigger by sawing and filing etc.,

**PC63.** solder both endplate and trigger to tongue

**PC64.** file the edges of tongue to ensure press or push-fit between tongue and housing

**PC65.** finish all sides of box clasp using smooth sandpaper and files

#### *Stamping patterns on precious metal sheet*

To be competent, the user/individual on the job must be able to:

**PC66.** place and secure cut metal sheet or jewellery in fixture or stamping block

**PC67.** choose impression punch with the required pattern

**PC68.** strike the punch on the metal sheet or jewellery with a single blow of hammer and file the stamped components using files

#### *Making a simple chain*

To be competent, the user/individual on the job must be able to:

**PC69.** anneal measured length of wire wrapped into a coil

- PC70.** clean the wire using pickling and water
- PC71.** straighten the wire using wood dowelling and a vice
- PC72.** wrap the coil around the wooden dowel or mandrels of the required size for making jump ring coil
- PC73.** anneal, pickle and rinse the jump ring coil
- PC74.** cut off jump rings from the coil using jewellers saw and flatten them using an anvil and flat-faced planishing hammer
- PC75.** interlink jump rings to form a chain and solder ring tips
- PC76.** check the flexibility of chain and attach suitable hook or clasp to the chain
- PC77.** measure the final length

#### *Controlling precious metal loss*

To be competent, the user/individual on the job must be able to:

- PC78.** maintain metal loss limit as per company's loss margin policy
- PC79.** accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)
- PC80.** maintain metal loss related documentation

#### *Achieving productivity*

To be competent, the user/individual on the job must be able to:

- PC81.** ensure timely delivery of defect-free product or component to the next process and daily or hourly production target is achieved
- PC82.** report to the supervisor about any problems faced or anticipated during the complete process
- PC83.** make sure oiling and cleaning of the roller, draw plate and all tools and equipment and machines used are done at regular intervals as scheduled

#### *Achieving quality standards*

To be competent, the user/individual on the job must be able to:

- PC84.** check the components before final submission
- PC85.** rework as per the senior's feedback whenever required, based on inputs from product design and development and production department

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** company's policies on acceptable limits of quality, delivery standards, safety practices and hazard, security and performance measurements of jewellery products
- KU2.** importance of non-disclosure of "confidential information" provided by the company
- KU3.** work flow involved in jewellery manufacturing process of the company
- KU4.** importance of the individual's role in the workflow
- KU5.** the reporting structures
- KU6.** different types of jewellery products like rings, pendants, bracelets, necklace etc.
- KU7.** various types of basic jewellery manufacturing processes like investment casting, polishing, soldering etc.



- KU8.** various physical properties like hardness, malleability, shrinkage factor of different fineness of precious metals like gold, silver, platinum etc.,
- KU9.** various components used in jewellery such as balls, wire, stampings and chains etc.
- KU10.** different types of tools used in jewellery component making such as draw plates, pliers, hammer, bench block, cup bur, cutter, metal ruler etc.,
- KU11.** various types of diamonds and gemstones used in jewellery and their physical properties like heat sensitivity, brittleness etc.
- KU12.** various types of stone setting used for different style of jewellery
- KU13.** measure dimensions using appropriate gauges or measuring tools like vernier calliper, wire gauge etc.,
- KU14.** process of melting and casting ingot and annealing for different karatage of precious metals etc.,
- KU15.** heat treatments and its effect with respect to different types of precious metal alloys
- KU16.** prescribed precious metal loss for the process while making components
- KU17.** good bench practices in order to reduce precious metal loss limits
- KU18.** product defects involved in rolling and drawing of wires/ sheets or other related component making operations
- KU19.** various textures or surface enhancement techniques like mill graining used in jewellery manufacturing
- KU20.** basic calculations in terms of calculating final weight, volume of jewellery for different precious metals, count of number of diamonds or gemstones etc.

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** fill the requisition slip for tools and materials required
- GS2.** read job sheets, company rules and compliance documents etc.,
- GS3.** communicate effectively with supervisors
- GS4.** organize required toolkit at the work bench for better time management
- GS5.** improvise upon the efficiency, based on past work experience and guidance from supervisor
- GS6.** analyse designs based on the 2D sketch

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparing raw materials, consumables and tools for various component making processes</i>	<b>6</b>	<b>10</b>	-	-
<b>PC1.</b> determine the quantity and weight of required raw material like rolled sheets, drawn wires of precious metal or alloy etc.,	2	3	-	-
<b>PC2.</b> select the appropriate tools and consumables like files, hammer, ingot mould, sand paper etc.,	2	3	-	-
<b>PC3.</b> prepare the tools, equipment and machines for component making processes	2	4	-	-
<i>Making a round tube</i>	<b>15</b>	<b>26</b>	-	-
<b>PC4.</b> cut the rolled sheet at one end to taper shape	1	2	-	-
<b>PC5.</b> calculate the width of the strip to get the final diameter and thickness of a tube	2	3	-	-
<b>PC6.</b> put the strip in a swage block and bend it approximately in round shape using an appropriate mandrel	2	4	-	-
<b>PC7.</b> bend strip using a thinner and thinner mandrel until the two sides meet	1	2	-	-
<b>PC8.</b> draw the formed or bent strip through a drawplate to get the sides closed	2	3	-	-
<b>PC9.</b> anneal the drawn tube	1	2	-	-
<b>PC10.</b> draw the tube through a smaller hole on drawplate to get the sides closed further	2	2	-	-
<b>PC11.</b> bind the binding wire around the tube to get a proper seam	1	2	-	-
<b>PC12.</b> place soldering chips, flux on the seam	1	2	-	-
<b>PC13.</b> solder, clean the tube and file it to remove any excess solder	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> solder piece of wire of smaller diameter at one open end of the tube for drawing	1	2	-	-
<i>Making balls</i>	<b>12</b>	<b>20</b>	-	-
<b>PC15.</b> prepare clean and filed flat metal sheet of required thickness as mentioned on the job sheet	1	2	-	-
<b>PC16.</b> cut the sheets in the required shape and size using jewellers saw or saw blade	1	2	-	-
<b>PC17.</b> choose the appropriate size of dapping block or cube and punches depending on the size of sheet and kind of metal	1	1	-	-
<b>PC18.</b> set annealed disk into a large dent or depression of dapping block and get hemispherical shape by hammering dapping punches	1	1	-	-
<b>PC19.</b> carry out punching in different dents or successively in smaller dents to achieve the final size or diameter of hemisphere or domes	2	3	-	-
<b>PC20.</b> ensure the proper thickness is maintained during punching stages	1	2	-	-
<b>PC21.</b> inspect the domes for any defects like extra metal or crack	1	2	-	-
<b>PC22.</b> solder two properly filed domes to get a complete ball shape	1	2	-	-
<b>PC23.</b> clean the soldered ball in a pickling bath	1	1	-	-
<b>PC24.</b> file and buff the balls to get final finish	1	2	-	-
<b>PC25.</b> carry out oiling, cleaning of the dapping block, dapping punches regularly	1	2	-	-
<i>Making grains or rawa</i>	<b>7</b>	<b>7</b>	-	-
<b>PC26.</b> roll a very thin metal sheet of high karat gold and/or silver alloys	1	1	-	-
<b>PC27.</b> scissor narrow fringes along the edge and trim off fringe to get many small squares or platelets of metal	1	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC28.</b> coil thin wire around a thin mandrel and cut into very small jump rings	1	1	-	-
<b>PC29.</b> coat the metal platelets or jump rings with charcoal powder to prevent them from sticking together during firing	1	1	-	-
<b>PC30.</b> place all the coated metal bits in a crucible covered with charcoal powder and fire in a kiln or oven	1	1	-	-
<b>PC31.</b> quench and clean granules using picking bath and water	1	1	-	-
<b>PC32.</b> sort the granules of different sizes manually or using sieves	1	1	-	-
<i>Making filigree wires</i>	<b>12</b>	<b>20</b>	-	-
<b>PC33.</b> interpret design which is drawn to 1:1 scale on paper	1	1	-	-
<b>PC34.</b> draw or roll pre-rolled thick wire to smaller required size or gauge	2	4	-	-
<b>PC35.</b> anneal and rinse the wire	1	2	-	-
<b>PC36.</b> straighten the wire using bench vice and hand vice	1	2	-	-
<b>PC37.</b> twist two wires using a hand tool or hand drill	1	2	-	-
<b>PC38.</b> flatten round frame wire or twisted filler wire or textured wire using an anvil and flat planishing hammer or pulling through fixed rolls	1	2	-	-
<b>PC39.</b> shape the frame or inner filler wires on a design using hand, shaping tools like pilers, tweezers and cutting tools like nippers or cold chisels	1	2	-	-
<b>PC40.</b> solder the frame wires to form the outer jacket	1	1	-	-
<b>PC41.</b> fill up the inner filler wires inside the frame wires	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC42.</b> solder the whole assembly of frame and filler wires	1	1	-	-
<b>PC43.</b> clean the assembly using an acid bath and water	1	1	-	-
<i>Making collets</i>	<b>9</b>	<b>15</b>	-	-
<b>PC44.</b> make jump rings of different sizes by turning a wire around the bottom portion or pavilion of the stone for making prong collet with wire	1	2	-	-
<b>PC45.</b> place a cross wire between the two jump rings and solder them to form prong collet	1	1	-	-
<b>PC46.</b> cut overlapped middle portion of the cross wire and finish using files	1	1	-	-
<b>PC47.</b> bend the cross wire ends to form prongs and solder with jump rings	1	1	-	-
<b>PC48.</b> trim and file extra prong tips before final stone setting	1	1	-	-
<b>PC49.</b> anneal and curve strip around the stone for making bezel collet	1	2	-	-
<b>PC50.</b> cut and solder strip ends to form a small ring-like shape	1	3	-	-
<b>PC51.</b> solder the joined strip to the flat sheet to form bezel collet for cabochon stones	1	2	-	-
<b>PC52.</b> file and taper bezel collet using conning block depending on stone shape before final stone setting	1	2	-	-
<i>Making a box clasp</i>	<b>15</b>	<b>20</b>	-	-
<b>PC53.</b> file a measured size of sheet and scribe marks for bending	2	2	-	-
<b>PC54.</b> cut a small square hole along the edge of the sheet for trigger fitment	1	2	-	-
<b>PC55.</b> score the marks bit deeper by sawing and then with a small triangular file	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC56.</b> file edges to get beveling before creasing the sheet	1	1	-	-
<b>PC57.</b> bend the sheet at scored marks to form a rectangular box or housing	1	2	-	-
<b>PC58.</b> solder edges and clean the housing	1	1	-	-
<b>PC59.</b> prepare another measured length sheet for making tongue, which would push-fit inside the housing	2	2	-	-
<b>PC60.</b> bend the sheet using planishing hammer and anvil and file edges to get the correct fit inside the housing	1	1	-	-
<b>PC61.</b> solder a sheet and close the housing box keeping one end open for the tongue	1	1	-	-
<b>PC62.</b> prepare measured size of end plate and trigger by sawing and filing etc.,	1	2	-	-
<b>PC63.</b> solder both endplate and trigger to tongue	1	1	-	-
<b>PC64.</b> file the edges of tongue to ensure press or push-fit between tongue and housing	1	2	-	-
<b>PC65.</b> finish all sides of box clasp using smooth sandpaper and files	1	1	-	-
<i>Stamping patterns on precious metal sheet</i>	<b>3</b>	<b>5</b>	-	-
<b>PC66.</b> place and secure cut metal sheet or jewellery in fixture or stamping block	1	2	-	-
<b>PC67.</b> choose impression punch with the required pattern	1	1	-	-
<b>PC68.</b> strike the punch on the metal sheet or jewellery with a single blow of hammer and file the stamped components using files	1	2	-	-
<i>Making a simple chain</i>	<b>9</b>	<b>15</b>	-	-
<b>PC69.</b> anneal measured length of wire wrapped into a coil	1	2	-	-
<b>PC70.</b> clean the wire using pickling and water	1	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC71.</b> straighten the wire using wood dowelling and a vice	1	2	-	-
<b>PC72.</b> wrap the coil around the wooden dowel or mandrels of the required size for making jump ring coil	1	2	-	-
<b>PC73.</b> anneal, pickle and rinse the jump ring coil	1	1	-	-
<b>PC74.</b> cut off jump rings from the coil using jewellers saw and flatten them using an anvil and flat-faced planishing hammer	1	2	-	-
<b>PC75.</b> interlink jump rings to form a chain and solder ring tips	1	2	-	-
<b>PC76.</b> check the flexibility of chain and attach suitable hook or clasp to the chain	1	2	-	-
<b>PC77.</b> measure the final length	1	1	-	-
<i>Controlling precious metal loss</i>	<b>4</b>	<b>6</b>	-	-
<b>PC78.</b> maintain metal loss limit as per company's loss margin policy	1	1	-	-
<b>PC79.</b> accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)	2	3	-	-
<b>PC80.</b> maintain metal loss related documentation	1	2	-	-
<i>Achieving productivity</i>	<b>3</b>	<b>6</b>	-	-
<b>PC81.</b> ensure timely delivery of defect-free product or component to the next process and daily or hourly production target is achieved	1	1	-	-
<b>PC82.</b> report to the supervisor about any problems faced or anticipated during the complete process	1	1	-	-
<b>PC83.</b> make sure oiling and cleaning of the roller, draw plate and all tools and equipment and machines used are done at regular intervals as scheduled	1	4	-	-
<i>Achieving quality standards</i>	<b>2</b>	<b>3</b>	-	-



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC84.</b> check the components before final submission	1	2	-	-
<b>PC85.</b> rework as per the senior's feedback whenever required, based on inputs from product design and development and production department	1	1	-	-
<b>NOS Total</b>	<b>97</b>	<b>153</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	G&J/N0611
<b>NOS Name</b>	Make various jewellery components
<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	Handmade Gold and Gems-set Jewellery, Silver Smithing
<b>Occupation</b>	Gold smithy (Basic), Component Making/Filling/Assembling , Goldsmith
<b>NSQF Level</b>	3
<b>Credits</b>	7
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## **G&J/N0610: Make the jewellery frame**

### **Description**

This OS unit is about making the frame of precious metal jewellery, which forms an outer jacket in which various components are soldered or assembled to form a complete jewellery

### **Scope**

The scope covers the following :

- Preparing raw materials, consumables and tools for frame making processes
- Prepare the frame and solder the components
- Controlling precious metal loss
- Achieving productivity
- Achieving quality standards

### **Elements and Performance Criteria**

#### *Preparing raw materials, consumables and tools for frame making processes*

To be competent, the user/individual on the job must be able to:

- PC1.** determine the quantity and weight of required raw material like a sheet, wire of precious metal or alloy etc.,
- PC2.** select appropriate consumables and tools like cutter, files, hammer, sandpaper, position clay, plaster of paris etc.,
- PC3.** prepare the tools, equipment and machines for frame making process

#### *Prepare the frame and solder the components*

To be competent, the user/individual on the job must be able to:

- PC4.** roll or draw flat or round wire, strip or sheet for making frame parts
- PC5.** anneal, pickle and rinse all the frame parts
- PC6.** file and polish all the frame parts
- PC7.** bend and shape frame parts using a tweezer or suitable tool to get the design mentioned on the job sheet or design sheet
- PC8.** make accurate outlines or layout of the design on positioning clay
- PC9.** arrange all the outer formed frame parts on the positioning clay
- PC10.** place all the inner components like collet, filigree, granules, link, chain etc., inside frame outline
- PC11.** check symmetry, the flow of the design and place outmost frame metal strip around the assembly
- PC12.** prepare a paste of POP (Plaster of Paris) and water and pour it over the assembly
- PC13.** remove the positioning clay after POP mixture settles down and heat the die using a soldering torch
- PC14.** place soldering balls, chips carefully on the joints and solder the assembly
- PC15.** pickle, rinse and dry the whole assembly

**PC16.** carry out final polishing of the assembly

**PC17.** check the flexibility of the joints

*Controlling precious metal loss*

To be competent, the user/individual on the job must be able to:

**PC18.** maintain loss limit as per company's loss margin policy

**PC19.** accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)

*Achieving productivity*

To be competent, the user/individual on the job must be able to:

**PC20.** ensure timely delivery of defect-free product or component to the next process and daily or hourly production target is achieved

**PC21.** report to the supervisor about any problems faced or anticipated during the complete process

**PC22.** make sure oiling and cleaning of all the tools, equipment and machines used are done at regular intervals as scheduled

*Achieving quality standards*

To be competent, the user/individual on the job must be able to:

**PC23.** check the frame and component assembly before final submission

**PC24.** rework as per the senior's feedback whenever required, based on inputs from product design and development and production department

## Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

**KU1.** company's policies on acceptable limits of quality, delivery standards, safety practices and hazard, security and performance measurements of jewellery products

**KU2.** importance of non-disclosure of "confidential information" provided by the company

**KU3.** work flow involved in jewellery manufacturing process of the company

**KU4.** importance of the individual's role in the workflow

**KU5.** the reporting structures

**KU6.** different types of jewellery products like rings, pendants, bracelets, necklace etc.

**KU7.** various types of basic jewellery manufacturing processes like investment casting, polishing, soldering etc.

**KU8.** various physical properties like hardness, malleability, shrinkage factor of different fineness of precious metals like gold, silver, platinum etc.,

**KU9.** different types of tools used in jewellery frame making such as draw plates, pliers, hammer, bench block, cup bur, cutter, metal ruler etc.,

**KU10.** various types of diamonds and gemstones used in jewellery and their physical properties like heat sensitivity, brittleness etc.

**KU11.** various types of stone setting used for different style of jewellery

**KU12.** measure dimensions using appropriate gauges or measuring tools like vernier calliper, wire gauge etc.,

- KU13.** process of melting and casting ingot and annealing for different karatage of precious metals etc.,
- KU14.** heat treatments and its effect with respect to different types of precious metal alloys
- KU15.** prescribed precious metal loss for the process while making components
- KU16.** good bench practices in order to reduce precious metal loss limits
- KU17.** product defects involved in rolling and drawing of wires/ sheets or other related component making operations
- KU18.** various textures or surface enhancement techniques like mill graining used in jewellery manufacturing
- KU19.** basic calculations in terms of calculating final weight, volume of jewellery for different precious metals, count of number of diamonds or gemstones etc.

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** fill the requisition slip for tools and materials required
- GS2.** read job sheets, company rules and compliance documents etc.,
- GS3.** communicate effectively with supervisors
- GS4.** organize required toolkit at the work bench for better time management
- GS5.** improvise upon the efficiency, based on past work experience and guidance from supervisor
- GS6.** analyse designs based on the 2D sketch

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Preparing raw materials, consumables and tools for frame making processes</i>	<b>5</b>	<b>10</b>	-	-
<b>PC1.</b> determine the quantity and weight of required raw material like a sheet, wire of precious metal or alloy etc.,	1	2	-	-
<b>PC2.</b> select appropriate consumables and tools like cutter, files, hammer, sandpaper, position clay, plaster of paris etc.,	2	4	-	-
<b>PC3.</b> prepare the tools, equipment and machines for frame making process	2	4	-	-
<i>Prepare the frame and solder the components</i>	<b>18</b>	<b>30</b>	-	-
<b>PC4.</b> roll or draw flat or round wire, strip or sheet for making frame parts	1	2	-	-
<b>PC5.</b> anneal, pickle and rinse all the frame parts	1	1	-	-
<b>PC6.</b> file and polish all the frame parts	1	2	-	-
<b>PC7.</b> bend and shape frame parts using a tweezer or suitable tool to get the design mentioned on the job sheet or design sheet	3	4	-	-
<b>PC8.</b> make accurate outlines or layout of the design on positioning clay	2	3	-	-
<b>PC9.</b> arrange all the outer formed frame parts on the positioning clay	2	3	-	-
<b>PC10.</b> place all the inner components like collet, filigree, granules, link, chain etc., inside frame outline	1	2	-	-
<b>PC11.</b> check symmetry, the flow of the design and place outmost frame metal strip around the assembly	1	2	-	-
<b>PC12.</b> prepare a paste of POP (Plaster of Paris) and water and pour it over the assembly	1	2	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC13.</b> remove the positioning clay after POP mixture settles down and heat the die using a soldering torch	1	2	-	-
<b>PC14.</b> place soldering balls, chips carefully on the joints and solder the assembly	1	2	-	-
<b>PC15.</b> pickle, rinse and dry the whole assembly	1	1	-	-
<b>PC16.</b> carry out final polishing of the assembly	1	2	-	-
<b>PC17.</b> check the flexibility of the joints	1	2	-	-
<i>Controlling precious metal loss</i>	<b>2</b>	<b>5</b>	-	-
<b>PC18.</b> maintain loss limit as per company's loss margin policy	1	3	-	-
<b>PC19.</b> accumulate precious metal dust or fragments dispersed during the process as per standard operating procedure (SOP)	1	2	-	-
<i>Achieving productivity</i>	<b>4</b>	<b>6</b>	-	-
<b>PC20.</b> ensure timely delivery of defect-free product or component to the next process and daily or hourly production target is achieved	1	1	-	-
<b>PC21.</b> report to the supervisor about any problems faced or anticipated during the complete process	1	2	-	-
<b>PC22.</b> make sure oiling and cleaning of all the tools, equipment and machines used are done at regular intervals as scheduled	2	3	-	-
<i>Achieving quality standards</i>	<b>2</b>	<b>4</b>	-	-
<b>PC23.</b> check the frame and component assembly before final submission	1	2	-	-
<b>PC24.</b> rework as per the senior's feedback whenever required, based on inputs from product design and development and production department	1	2	-	-
<b>NOS Total</b>	<b>31</b>	<b>55</b>	-	-



## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	G&J/N0610
<b>NOS Name</b>	Make the jewellery frame
<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	Handmade Gold and Gems-set Jewellery, Silver Smithing
<b>Occupation</b>	Gold smithy (Basic), Component Making/Filling/Assembling
<b>NSQF Level</b>	3
<b>Credits</b>	3
<b>Version</b>	3.0
<b>Last Reviewed Date</b>	NA
<b>Next Review Date</b>	17/11/2025
<b>NSQC Clearance Date</b>	17/11/2022

## **G&J/N9949: Follow material and energy conservation practices at workplace**

### **Description**

This OS unit is about adopting sustainable practices and optimizing use of resources, especially material, energy and waste, in day-to-day operations at work.

### **Scope**

The scope covers the following :

- Material conservation practices at workplace
- Energy/electricity conservation practices at workplace

### **Elements and Performance Criteria**

#### *Material conservation practices at workplace*

To be competent, the user/individual on the job must be able to:

- PC1.** identify ways to optimize usage of material including water in various activities and processes
- PC2.** check for spills/leakages in various activities and processes
- PC3.** plug spills/leakages and escalate the issue to appropriate authority if unable to rectify
- PC4.** carry out routine cleaning of tools, machines and equipment

#### *Energy/electricity conservation practices at workplace*

To be competent, the user/individual on the job must be able to:

- PC5.** identify ways to optimize usage of electricity/energy in various activities and processes
- PC6.** check if the equipment/machine is functioning normally before starting work and rectify the issues wherever required
- PC7.** report malfunctioning (fumes/sparks/emission/vibration/noise) of the equipment/machine and delay in maintenance of equipment
- PC8.** check electrical equipment and appliances are properly connected and turned off when not in use

### **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** company's policies on material and energy conservation practices
- KU2.** potential hazards and risks involved in the work
- KU3.** layout of the workstation and electrical and thermal equipment used as required
- KU4.** ways of efficient material management including water
- KU5.** basics of electricity and prevalent energy efficient devices
- KU6.** common practices of conserving electricity

- KU7.** safety precautions (electric and mechanical isolation) before starting any maintenance activity on machine/equipment.

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read Standard Operating Procedure(SOP) documents
- GS2.** communicate effectively about material and energy conservation practices to others
- GS3.** make timely communication for the decisions to be taken at work
- GS4.** complete tasks efficiently and accurately within stipulated time
- GS5.** critically analyze the processes carried out by self and colleagues in the department related to material and energy conservation
- GS6.** record observations on effect of material and energy conservation at workplace.
- GS7.** work with supervisors/team members to carry out related tasks

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Material conservation practices at workplace</i>	<b>2</b>	<b>4</b>	-	-
<b>PC1.</b> identify ways to optimize usage of material including water in various activities and processes	0.5	1	-	-
<b>PC2.</b> check for spills/leakages in various activities and processes	0.5	1	-	-
<b>PC3.</b> plug spills/leakages and escalate the issue to appropriate authority if unable to rectify	0.5	1	-	-
<b>PC4.</b> carry out routine cleaning of tools, machines and equipment	0.5	1	-	-
<i>Energy/electricity conservation practices at workplace</i>	<b>2</b>	<b>4</b>	-	-
<b>PC5.</b> identify ways to optimize usage of electricity/energy in various activities and processes	0.5	1	-	-
<b>PC6.</b> check if the equipment/machine is functioning normally before starting work and rectify the issues wherever required	0.5	1	-	-
<b>PC7.</b> report malfunctioning (fumes/sparks/emission/vibration/noise) of the equipment/machine and delay in maintenance of equipment	0.5	1	-	-
<b>PC8.</b> check electrical equipment and appliances are properly connected and turned off when not in use	0.5	1	-	-
<b>NOS Total</b>	<b>4</b>	<b>8</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	G&J/N9949
<b>NOS Name</b>	Follow material and energy conservation practices at workplace
<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	Diamond Processing, Handmade Gold and Gems-set Jewellery, Jewellery Retail, Cast and diamonds-set jewellery, Gemstone Processing, Silver Smithing, Imitation Jewellery
<b>Occupation</b>	Generic
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	2.0
<b>Last Reviewed Date</b>	22/10/2024
<b>Next Review Date</b>	22/10/2027
<b>NSQC Clearance Date</b>	22/10/2024

## **G&J/N9902: Maintain health and safety at workplace**

### **Description**

This OS unit is about being aware of, communicating and taking steps towards minimizing potential hazards and maintaining health and safety at workplace.

### **Scope**

The scope covers the following :

- Health, hygiene and safety in work area
- Fire safety
- Emergencies, rescue and first aid procedures
- Waste management

### **Elements and Performance Criteria**

#### *Health, hygiene and safety in work area*

To be competent, the user/individual on the job must be able to:

- PC1.** follow regular cleaning and disinfection practices at work place using appropriate techniques and materials
- PC2.** follow hand hygiene practices at work place using appropriate techniques and materials
- PC3.** follow alternative ways of conducting meeting and organizing event to ensure safety
- PC4.** follow contactless attendance system
- PC5.** report regarding the contagious illness of self or people in close contact
- PC6.** use appropriate protective clothing/ equipment for specific tasks
- PC7.** identify hazardous activities and the possible causes of risks or accidents in the workplace
- PC8.** follow safe working practices while dealing with hazards to ensure safety of self and others
- PC9.** maintain appropriate working postures to minimize occupational health related issues

#### *Fire safety*

To be competent, the user/individual on the job must be able to:

- PC10.** use appropriate type of fire extinguisher
- PC11.** apply appropriate rescue techniques during fire hazard
- PC12.** ensure good housekeeping in order to prevent fire hazards

#### *Emergencies, rescue and first aid procedures*

To be competent, the user/individual on the job must be able to:

- PC13.** provide appropriate first aid procedure to victims wherever required eg.in case of bleeding, burns, choking, electric shock etc.
- PC14.** respond promptly and appropriately to an accident or medical emergency.
- PC15.** follow emergency procedures such as raising alarm, safe evacuation etc.

#### *Waste management*

To be competent, the user/individual on the job must be able to:

- PC16.** identify recyclable, non-recyclable and hazardous waste

**PC17.** collect the segregated waste - at designated space

**PC18.** dispose non-recyclable waste appropriately and deposit recyclable and reusable material at identified location

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

- KU1.** company's policies on safety, hazards and personnel management
- KU2.** signages that refer to health and safety in work place
- KU3.** the reporting structure
- KU4.** health and safety hazards commonly present in the work place and related precautions
- KU5.** preventative and remedial actions to be taken in case of exposure to toxic material
- KU6.** methods of accident prevention
- KU7.** how different chemicals react and the related hazards
- KU8.** how to use machines and tools without causing any accident
- KU9.** importance of using protective clothing/ equipment while working
- KU10.** precautionary activities to prevent the fire accident
- KU11.** various causes of fire
- KU12.** techniques of using different fire extinguishers
- KU13.** different materials used for extinguishing fire
- KU14.** rescue techniques applied during a fire hazard
- KU15.** various types of safety signs and their meaning
- KU16.** appropriate basic first aid treatment relevant to different condition e.g. bleeding, minor burns, eye injuries etc.,
- KU17.** casualty lifting in case of an accident
- KU18.** usage of different colors of dustbins.
- KU19.** categorization of waste into dry, wet, recyclable, non-recyclable and items of single-use plastics.
- KU20.** waste management and methods of waste disposal.

## **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** read and comprehend labels, charts, signages
- GS2.** read and comprehend manuals of operations
- GS3.** communicate effectively, the risk of not following safety measures
- GS4.** respond to emergencies/accidents, by taking an appropriate and timely decision
- GS5.** organize work schedule, work area, tools, equipment and material to minimize health and safety risk
- GS6.** ensure appropriate action in case of any emergencies, accidents or fire at the work location



- GS7.** analyze untoward incidents from the past and follow correct procedures in handling machines, tools or hazardous chemicals
- GS8.** critically analyze the processes carried out by self and colleagues in the department to spot potential hazards and safety issues
- GS9.** record data on waste disposal at workplace.
- GS10.** complete statutory documents relevant to safety and hygiene.

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Health, hygiene and safety in work area</i>	<b>9</b>	<b>16</b>	-	-
<b>PC1.</b> follow regular cleaning and disinfection practices at work place using appropriate techniques and materials	1	2	-	-
<b>PC2.</b> follow hand hygiene practices at work place using appropriate techniques and materials	1	2	-	-
<b>PC3.</b> follow alternative ways of conducting meeting and organizing event to ensure safety	1	2	-	-
<b>PC4.</b> follow contactless attendance system	1	1	-	-
<b>PC5.</b> report regarding the contagious illness of self or people in close contact	1	2	-	-
<b>PC6.</b> use appropriate protective clothing/ equipment for specific tasks	1	2	-	-
<b>PC7.</b> identify hazardous activities and the possible causes of risks or accidents in the workplace	1	2	-	-
<b>PC8.</b> follow safe working practices while dealing with hazards to ensure safety of self and others	1	1	-	-
<b>PC9.</b> maintain appropriate working postures to minimize occupational health related issues	1	2	-	-
<i>Fire safety</i>	<b>3</b>	<b>6</b>	-	-
<b>PC10.</b> use appropriate type of fire extinguisher	1	3	-	-
<b>PC11.</b> apply appropriate rescue techniques during fire hazard	1	2	-	-
<b>PC12.</b> ensure good housekeeping in order to prevent fire hazards	1	1	-	-
<i>Emergencies, rescue and first aid procedures</i>	<b>3</b>	<b>4</b>	-	-
<b>PC13.</b> provide appropriate first aid procedure to victims wherever required eg.in case of bleeding, burns, choking, electric shock etc.	1	1	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC14.</b> respond promptly and appropriately to an accident or medical emergency.	1	2	-	-
<b>PC15.</b> follow emergency procedures such as raising alarm, safe evacuation etc.	1	1	-	-
<i>Waste management</i>	<b>3</b>	<b>6</b>	-	-
<b>PC16.</b> identify recyclable, non-recyclable and hazardous waste	1	2	-	-
<b>PC17.</b> collect the segregated waste - at designated space	1	2	-	-
<b>PC18.</b> dispose non-recyclable waste appropriately and deposit recyclable and reusable material at identified location	1	2	-	-
<b>NOS Total</b>	<b>18</b>	<b>32</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	G&J/N9902
<b>NOS Name</b>	Maintain health and safety at workplace
<b>Sector</b>	Gem & Jewellery
<b>Sub-Sector</b>	Handmade Gold and Gems-set Jewellery, Gemstone Processing, Silver Smithing, Jewellery Retail, Cast and diamonds-set jewellery, Imitation Jewellery, Diamond Processing
<b>Occupation</b>	Generic
<b>NSQF Level</b>	3
<b>Credits</b>	1
<b>Version</b>	5.0
<b>Last Reviewed Date</b>	18/02/2025
<b>Next Review Date</b>	18/02/2028
<b>NSQC Clearance Date</b>	18/02/2025

## DGT/VSQ/N0101: Employability Skills (30 Hours)

### Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

### Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

### Elements and Performance Criteria

#### *Introduction to Employability Skills*

To be competent, the user/individual on the job must be able to:

**PC1.** understand the significance of employability skills in meeting the job requirements

#### *Constitutional values – Citizenship*

To be competent, the user/individual on the job must be able to:

**PC2.** identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices

#### *Becoming a Professional in the 21st Century*

To be competent, the user/individual on the job must be able to:

**PC3.** explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.

#### *Basic English Skills*

To be competent, the user/individual on the job must be able to:

**PC4.** speak with others using some basic English phrases or sentences

#### *Communication Skills*

To be competent, the user/individual on the job must be able to:

**PC5.** follow good manners while communicating with others

**PC6.** work with others in a team

### *Diversity & Inclusion*

To be competent, the user/individual on the job must be able to:

**PC7.** communicate and behave appropriately with all genders and PwD

**PC8.** report any issues related to sexual harassment

### *Financial and Legal Literacy*

To be competent, the user/individual on the job must be able to:

**PC9.** use various financial products and services safely and securely

**PC10.** calculate income, expenses, savings etc.

**PC11.** approach the concerned authorities for any exploitation as per legal rights and laws

### *Essential Digital Skills*

To be competent, the user/individual on the job must be able to:

**PC12.** operate digital devices and use its features and applications securely and safely

**PC13.** use internet and social media platforms securely and safely

### *Entrepreneurship*

To be competent, the user/individual on the job must be able to:

**PC14.** identify and assess opportunities for potential business

**PC15.** identify sources for arranging money and associated financial and legal challenges

### *Customer Service*

To be competent, the user/individual on the job must be able to:

**PC16.** identify different types of customers

**PC17.** identify customer needs and address them appropriately

**PC18.** follow appropriate hygiene and grooming standards

### *Getting ready for apprenticeship & Jobs*

To be competent, the user/individual on the job must be able to:

**PC19.** create a basic biodata

**PC20.** search for suitable jobs and apply

**PC21.** identify and register apprenticeship opportunities as per requirement

## **Knowledge and Understanding (KU)**

The individual on the job needs to know and understand:

**KU1.** need for employability skills

**KU2.** various constitutional and personal values

**KU3.** different environmentally sustainable practices and their importance

**KU4.** Twenty first (21st) century skills and their importance

**KU5.** how to use basic spoken English language

**KU6.** Do and dont of effective communication

**KU7.** inclusivity and its importance

**KU8.** different types of disabilities and appropriate communication and behaviour towards PwD

**KU9.** different types of financial products and services

- KU10.** how to compute income and expenses
- KU11.** importance of maintaining safety and security in financial transactions
- KU12.** different legal rights and laws
- KU13.** how to operate digital devices and applications safely and securely
- KU14.** ways to identify business opportunities
- KU15.** types of customers and their needs
- KU16.** how to apply for a job and prepare for an interview
- KU17.** apprenticeship scheme and the process of registering on apprenticeship portal

### **Generic Skills (GS)**

User/individual on the job needs to know how to:

- GS1.** communicate effectively using appropriate language
- GS2.** behave politely and appropriately with all
- GS3.** perform basic calculations
- GS4.** solve problems effectively
- GS5.** be careful and attentive at work
- GS6.** use time effectively
- GS7.** maintain hygiene and sanitisation to avoid infection

## Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC1.</b> understand the significance of employability skills in meeting the job requirements	-	-	-	-
<i>Constitutional values – Citizenship</i>	<b>1</b>	<b>1</b>	-	-
<b>PC2.</b> identify constitutional values, civic rights, duties, personal values and ethics and environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	<b>1</b>	<b>3</b>	-	-
<b>PC3.</b> explain 21st Century Skills such as Self-Awareness, Behavior Skills, Positive attitude, self-motivation, problem-solving, creative thinking, time management, social and cultural awareness, emotional awareness, continuous learning mindset etc.	-	-	-	-
<i>Basic English Skills</i>	<b>2</b>	<b>3</b>	-	-
<b>PC4.</b> speak with others using some basic English phrases or sentences	-	-	-	-
<i>Communication Skills</i>	<b>1</b>	<b>1</b>	-	-
<b>PC5.</b> follow good manners while communicating with others	-	-	-	-
<b>PC6.</b> work with others in a team	-	-	-	-
<i>Diversity &amp; Inclusion</i>	<b>1</b>	<b>1</b>	-	-
<b>PC7.</b> communicate and behave appropriately with all genders and PwD	-	-	-	-
<b>PC8.</b> report any issues related to sexual harassment	-	-	-	-
<i>Financial and Legal Literacy</i>	<b>3</b>	<b>4</b>	-	-
<b>PC9.</b> use various financial products and services safely and securely	-	-	-	-



Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<b>PC10.</b> calculate income, expenses, savings etc.	-	-	-	-
<b>PC11.</b> approach the concerned authorities for any exploitation as per legal rights and laws	-	-	-	-
<i>Essential Digital Skills</i>	<b>4</b>	<b>6</b>	-	-
<b>PC12.</b> operate digital devices and use its features and applications securely and safely	-	-	-	-
<b>PC13.</b> use internet and social media platforms securely and safely	-	-	-	-
<i>Entrepreneurship</i>	<b>3</b>	<b>5</b>	-	-
<b>PC14.</b> identify and assess opportunities for potential business	-	-	-	-
<b>PC15.</b> identify sources for arranging money and associated financial and legal challenges	-	-	-	-
<i>Customer Service</i>	<b>2</b>	<b>2</b>	-	-
<b>PC16.</b> identify different types of customers	-	-	-	-
<b>PC17.</b> identify customer needs and address them appropriately	-	-	-	-
<b>PC18.</b> follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship &amp; Jobs</i>	<b>1</b>	<b>3</b>	-	-
<b>PC19.</b> create a basic biodata	-	-	-	-
<b>PC20.</b> search for suitable jobs and apply	-	-	-	-
<b>PC21.</b> identify and register apprenticeship opportunities as per requirement	-	-	-	-
<b>NOS Total</b>	<b>20</b>	<b>30</b>	-	-

## National Occupational Standards (NOS) Parameters

<b>NOS Code</b>	DGT/VSQ/N0101
<b>NOS Name</b>	Employability Skills (30 Hours)
<b>Sector</b>	Cross Sectoral
<b>Sub-Sector</b>	Professional Skills
<b>Occupation</b>	Employability
<b>NSQF Level</b>	2
<b>Credits</b>	1
<b>Version</b>	1.0
<b>Last Reviewed Date</b>	18/02/2025
<b>Next Review Date</b>	18/02/2028
<b>NSQC Clearance Date</b>	18/02/2025

## Assessment Guidelines and Assessment Weightage

### Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take

subsequent assessment on the balance NOS's to pass the Qualification Pack.

6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

**Minimum Aggregate Passing % at QP Level : 50**

**(Please note:** Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

**Assessment Weightage**

Compulsory NOS

<b>National Occupational Standards</b>	<b>Theory Marks</b>	<b>Practical Marks</b>	<b>Project Marks</b>	<b>Viva Marks</b>	<b>Total Marks</b>	<b>Weightage</b>
G&J/N0601.Draw wire, roll sheet, and thick wire from precious metal	32	64	-	-	96	10
G&J/N0611.Make various jewellery components	97	153	-	-	250	30
G&J/N0610.Make the jewellery frame	31	55	-	-	86	30
G&J/N9949.Follow material and energy conservation practices at workplace	4	8	-	-	12	10
G&J/N9902.Maintain health and safety at workplace	18	32	-	-	50	10
DGT/VSQ/N0101.Employability Skills (30 Hours)	20	30	0	0	50	10
<b>Total</b>	<b>202</b>	<b>342</b>	<b>0</b>	<b>0</b>	<b>544</b>	<b>100</b>

## Acronyms

<b>NOS</b>	National Occupational Standard(s)
<b>NSQF</b>	National Skills Qualifications Framework
<b>QP</b>	Qualifications Pack
<b>TVET</b>	Technical and Vocational Education and Training

## Glossary

<b>Sector</b>	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.
<b>Sub-sector</b>	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
<b>Occupation</b>	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
<b>Job role</b>	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
<b>Occupational Standards (OS)</b>	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
<b>Performance Criteria (PC)</b>	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
<b>National Occupational Standards (NOS)</b>	NOS are occupational standards which apply uniquely in the Indian context.
<b>Qualifications Pack (QP)</b>	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.
<b>Unit Code</b>	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
<b>Unit Title</b>	Unit title gives a clear overall statement about what the incumbent should be able to do.
<b>Description</b>	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.
<b>Scope</b>	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.
<b>Knowledge and Understanding (KU)</b>	Knowledge and Understanding (KU) 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.

<b>Organisational Context</b>	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.
<b>Technical Knowledge</b>	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
<b>Core Skills/ Generic Skills (GS)</b>	Core skills or Generic Skills (GS) 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.
<b>Electives</b>	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
<b>Options</b>	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.