



ASSESSMENT MATERIAL

EVIDENCE GUIDE

Qualification code:

0214G&J2

Level: 02

Credit: 80

Version: 1

GEMSTONE CARVING

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ASSESSMENT AND ASSESSMENT PANEL DETAILS

| | | | |
|--|--------------------------|--------------------------|--------------------------|
| Competent | <input type="checkbox"/> | Not Yet Competent | <input type="checkbox"/> |
| Assessment | <input type="checkbox"/> | Re-Assessment | <input type="checkbox"/> |
| Candidate's Instructor name: | | | |
| Candidate's Instructor signature: | | | |
| Private Sector Expert's name: | | | |
| Private Sector Expert's signature: | | | |
| Assessor's Name: | | Assessor Code: | |
| Assessor's Signature: | | Date | |
| | | DD MM YYYY | |

CANDIDATE DETAILS

| | |
|-----------------------------|--|
| Candidate Name: | |
| Father Name | |
| Institute Name and District | |
| CNIC # | <input type="text"/> |
| OR | |
| Registration Number: | |
| Gender | Male <input type="checkbox"/> Female <input type="checkbox"/> |
| Candidate Consent | I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal. |
| Candidate Signature: | |

ASSESSMENT RESULTS SUMMARY FORM

You can use this coversheet as an *Assessment Results Summary Form*. Simply post a photocopy of this completed coversheet to **NAVTTTC**

NAVTTTC OFFICE ONLY

1. DATE FORM

RECEIVED:

| | | | | | | | |
|----|----|------|--|--|--|--|--|
| | | | | | | | |
| DD | MM | YYYY | | | | | |

2. DATE ENTERED INTO DATABASE:

| | | | | | | | |
|----|----|------|--|--|--|--|--|
| | | | | | | | |
| DD | MM | YYYY | | | | | |

1

ASSESSMENT SUMMARY AND RECORD

| ACTIVITY | METHOD | | | | DESIRED OUTCOMES | RESULT | |
|-------------------------|---------|------|-----------|-------------|--|-----------|----------------------|
| NATURE OF ACTIVITY | WRITTEN | ORAL | PORTFOLIO | OBSERVATION | DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF: GEMSTONE CARVING | COMPETENT | NOT YET COMPETENT |
| Practical final project | | ✓ | ✓ | ✓ | Complete supplied project brief related to application of Gemstone Carving: <ul style="list-style-type: none"> • Prepare cabochon manually • Prepare cabochon with auto cab making • Sanding and polishing of cabochon • Basic carving work • Advance carving work • Sanding and polishing of carving work | | |
| Knowledge assessment | ✓ | ✓ | | | <ul style="list-style-type: none"> • Answer all questions the Assessment Panel will have following oral presentation of completed project brief | | |
| Other requirements | | | | | <ul style="list-style-type: none"> • N/A | | |

2

CANDIDATE ASSESSMENT

Candidate Name..... Father Name

ALL WORK ASSESSED FOR THESE COMPETENCY STANDARDS MUST BE YOUR OWN WORK.

GUIDANCE TO CANDIDATE

To meet this standard you are required to complete the following tasks within **five hours** timeframe:

- Prepare cabochon manually
- Prepare cabochon with auto cab making
- Sanding and polishing of cabochon
- Basic carving work
- Advance carving work
- Sanding and polishing of carving work

Important Note: The following general performance criteria will be followed and performed in all the tasks (where applicable) by the candidate in order to meet this standard.

- ✓ Follow health and safety procedure as per the requirements of given task
- ✓ Prepare work station as per the requirements of task
- ✓ Select tools/ equipment as per the requirements of task
- ✓ Report to supervisor in case of any contingency after taking necessary actions
- ✓ Complete the work by following sequence of operations
- ✓ Perform task(s) within standard timeframe

| ACTIVITIES | CANDIDATE RESPONSE |
|--|---|
| 1.Tasks I. Complete practical task in performing to Prepare cabochon manually | <p>During Practical assessment under observation by an assessor, I will correctly carry out the following task.</p> <ul style="list-style-type: none"> • Marking and sawing of stone <ul style="list-style-type: none"> ✓ Mark stone for Cabochon making ✓ Remove the unwanted areas with plier ✓ Cut the marked stone with trim saw machine • Template marking on stone <ul style="list-style-type: none"> ✓ Select size of cabochon on template ✓ Perform template marking • Prepare Cabochon as per template marking <ul style="list-style-type: none"> ✓ Ensure adequate water supply for cutting process ✓ Make necessary arrangements in workstation ✓ prepare cabochon with grinding machine • Doping and course grinding of stone <ul style="list-style-type: none"> ✓ Arrange material for doping process ✓ Fix stone on dope stick ✓ Make smooth surface of stone ✓ Perform course grinding at grit #180/#220/#260/#320 |

| | |
|---|--|
| II. Complete practical task in performing to Prepare cabochon with auto cab making | <ul style="list-style-type: none"> • Marking and sawing of stone <ul style="list-style-type: none"> ✓ Mark stone for Cabochon making ✓ Remove the unwanted areas with pliers ✓ Mark stone and Cut with trim saw machine • Prepare stone for cab making <ul style="list-style-type: none"> ✓ Ensure adequate water supply for cutting process ✓ Make necessary arrangements in work station to prepare stone for cab making ✓ Adjust auto cab machine for cabochon Making • Perform doping <ul style="list-style-type: none"> ✓ Arrange material for doping process ✓ Fix stone on dope stick ✓ Fix of doped stone in auto cab making machine • Prepare cabochon on auto cab machine <ul style="list-style-type: none"> ✓ Ensure adequate water supply for cutting process ✓ Adjust machine according to template ✓ Execute the auto cab making |
| III. Complete practical task in performing Sanding and polishing of cabochon | <ul style="list-style-type: none"> • Perform sanding on cab stone <ul style="list-style-type: none"> ✓ Arrange sanding paper for sanding ✓ Perform sanding on the stone with Grit# 400, #600, #1000 sanding paper according requirement • Perform sanding with tumbler machine <ul style="list-style-type: none"> ✓ Identify and select appropriate sanding media ✓ Mix sanding abrasive according to defined ratio of material and media ✓ Add media with #600,#1000 abrasive to remove scratch • Perform Polishing with Tumbler Machine <ul style="list-style-type: none"> ✓ Select appropriate polishing media ✓ Use polishing abrasive according to defined ratio of material and media ✓ Add media abrasive #600,#1000 (Aluminum oxide) for pre polish ✓ Mix media with abrasive chrome oxide for polishing |
| IV. Complete practical task in performing Basic carving work | <ul style="list-style-type: none"> • Extract required shape for basic carving from stone <ul style="list-style-type: none"> ✓ Ensure adequate water supply for grinding process ✓ Perform pre marking on stone for desired carving design ✓ Perform removal of unwanted edges of stone as per marking ✓ Finalize the basic shape on stone • Perform basic carving <ul style="list-style-type: none"> ✓ Select tools and machine for basic carving process ✓ Install the carving tools in carving machine as per the requirement of the design ✓ Select course grinding with grinding wheels ✓ Perform basic carving and finalize the design |
| IV. Complete practical task in performing Basic carving work Advance carving work | <ul style="list-style-type: none"> • Develop 3D design with china clay <ul style="list-style-type: none"> ✓ Select China clay tools and machine ✓ Develop prototype model with china clay according to design • Extract required shape for advance carving from stone <ul style="list-style-type: none"> ✓ Select appropriate tools ✓ Perform pre marking on stone ✓ Perform removed of unwanted edge of stone as per marking ✓ Finalize the 3D shape on stone • Perform Advance carving <ul style="list-style-type: none"> ✓ Select appropriate tools and machine ✓ Mark points to stone according to model design ✓ Perform shaping as per model design on stone ✓ Finalize the 3D Carving work on stone |

| | |
|---|--|
| V. Complete practical task in performing Sanding and polishing of carving work | <ul style="list-style-type: none"> • Perform sanding on stone <ul style="list-style-type: none"> ✓ Use the flexible shaft machine for sanding process ✓ Use the small disk of silicon carbide for engraving carve lines ✓ Sanding on the stone with 400 sanding wheel according to requirement ✓ Sanding on the stone with 600 sanding wheel according to requirement ✓ Sanding on the stone with 1000 sanding wheel according to requirement ✓ Use the abrasive for sanding with rubber wheel if required • Perform polishing on stone <ul style="list-style-type: none"> ✓ Use the flexible shaft machine for polishing process ✓ Perform polishing of stone with cotton buff and diamond powder (0-2) rubber leather and wooden polishing abrasive for engraving carve lines. ✓ Perform polishing on the stone (aluminum oxide 6000 for pre polish) ✓ Perform polishing on the stone (aluminum oxide 1000 for pre polish) |
| 2. Other requirements | <ul style="list-style-type: none"> • NA |
| 3. Answer any questions your Assessor may have during the practical assessment | <ul style="list-style-type: none"> • My answers to questions are correct and demonstrate my understanding of the topics and their application |

Candidate NameFather Name

INSTRUCTIONS FOR ASSESSMENT PANEL**THIS SECTION CONTAINS MINIMUM EVIDENCE REQUIREMENTS**

- The Assessment Panel will consist of three members: a registered Assessor, the candidate's Instructor and an expert from the private sector.
- The project brief will consist of integrated task requirements to enable the candidate to supply sufficient evidence of their competence in the skills required to work as a Gemstone carving
- The project brief must be suitable for the level of knowledge and skills required (i.e. Level 2)
- The time frame for completion of assigned project brief is 5 hours

| ACTIVITIES | MINIMUM EVIDENCE REQUIRED | YES | NO | ASSESSOR COMMENTS |
|--|---|-----|----|-------------------|
| 1. Complete practical task in performing to perform Gemstone Carving under observation by an assessor, including: | During a practical assessment under observation by and assessor, the candidate correctly carried out the following tasks: | | | |
| Marking and sawing of stone | Mark stone for Cabochon making | | | |
| | Remove the unwanted areas with plier | | | |
| | Cut the marked stone with trim saw machine | | | |
| Template marking on stone | Select size of cabochon on template | | | |
| | Perform template marking | | | |
| Prepare Cabochon as per template marking | Ensure adequate water supply for cutting process | | | |
| | Make necessary arrangements in workstation | | | |
| | prepare cabochon with grinding machine | | | |
| Doping and course grinding of stone | Arrange material for doping process | | | |
| | Fix stone on dope stick | | | |
| | Make smooth surface of stone | | | |
| | Perform course grinding at grit #180/#220/#260/#320 | | | |
| Marking and sawing of stone | Mark stone for Cabochon making | | | |
| | Remove the unwanted areas with pliers | | | |
| | Mark stone and Cut with trim saw machine | | | |
| Prepare stone for cab making | Ensure adequate water supply for cutting process | | | |
| | Make necessary arrangements in work station to prepare stone for cab making | | | |

| | | | | |
|--|--|--|--|--|
| | Adjust auto cab machine for cabochon Making | | | |
| Perform doping | Arrange material for doping process | | | |
| | Fix stone on dope stick | | | |
| | Fix of doped stone in auto cab making machine | | | |
| Prepare cabochon on auto cab machine | Ensure adequate water supply for cutting process | | | |
| | Adjust machine according to template | | | |
| | Execute the auto cab making | | | |
| Perform sanding on cab stone | Arrange sanding paper for sanding | | | |
| | Perform sanding on the stone with Grit# 400, #600, #1000 sanding paper according requirement | | | |
| Perform Sanding with Tumbler Machine | Identify and select appropriate sanding media | | | |
| | Mix sanding abrasive according to defined ratio of material and media | | | |
| | Add media with #600,#1000 abrasive to remove scratch | | | |
| Perform Polishing with Tumbler Machine | Select appropriate polishing media | | | |
| | Use polishing abrasive according to defined ratio of material and media | | | |
| | Add media abrasive #600,#1000 (Aluminum oxide) for pre polish | | | |
| | Mix media with abrasive chrome oxide for polishing | | | |
| Required shape for basic carving from stone | Ensure adequate water supply for grinding process | | | |
| | Perform pre marking on stone for desired carving design | | | |
| | Perform removal of unwanted edges of stone as per marking | | | |
| | Finalize the basic shape on stone | | | |
| Perform basic carving | Select tools and machine for basic carving process | | | |
| | Install the carving tools in carving machine as per the requirement of the design | | | |
| | Select course grinding with grinding wheels | | | |
| | Perform basic carving and finalize the design | | | |
| Develop 3D design with china clay | Select China clay tools and machine | | | |
| | Develop prototype model with china clay according to design | | | |

| | | | | |
|--|--|--|--|--|
| Extract required shape for advance carving from stone | Select appropriate tools | | | |
| | Perform per marking on stone | | | |
| | Perform removed of unwanted edge of stone as per marking | | | |
| | Finalize the 3D shape on stone | | | |
| Perform Advance carving | Select appropriate tools and machine | | | |
| | Mark points to stone according to model design | | | |
| | Perform shaping as per model design on stone | | | |
| | Finalize the 3D Carving work on stone | | | |
| Perform sanding on stone | Use the flexible shaft machine for sanding process | | | |
| | Use the small disk of silicon carbide for engraving carve lines | | | |
| | Sanding on the stone with 400 sanding wheel according to requirement | | | |
| | Sanding on the stone with 600 sanding wheel according to requirement | | | |
| | Sanding on the stone with 1000 sanding wheel according to requirement | | | |
| | Use the abrasive for sanding with rubber wheel if required | | | |
| Perform polishing on stone | Use the flexible shaft machine for polishing process | | | |
| | Perform polishing of stone with cotton buff and diamond powder (0-2) rubber leather and wooden polishing abrasive for engraving carve lines. | | | |
| | Perform polishing on the stone (aluminum oxide 6000 for pre polish) | | | |

| ACTIVITIES | MINIMUM EVIDENCE REQUIRED | YES | NO | ASSESSOR COMMENTS ON CANDIDATE PERFORMANCE |
|--|---|-----|----|--|
| 2. Answer any questions their Assessor may have during the practical assessment | <p>Candidate answers to questions are correct and demonstrate understanding of the topics and their application.</p> <p><i>Assessor to document all questions asked and candidate answers below. Use extra sheets if required and attach.</i></p> | | | |

4

LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

| | |
|--------------------------------|--|
| instructions | <p>This section contains information regarding;</p> <ul style="list-style-type: none"> Context of the assessment List of required tools and equipment. List of consumable items required during the service |
| 1.Context of Assessment | <p>This practical final project will be conducted in a Lapidary lab/workshop environment.</p> <p>Required tools, equipment and consumables will vary according to project brief.</p> |

| 2. List of tools and equipment required | | |
|---|--|----------|
| S. No | Name of Items (tools and equipments) | Quantity |
| 01 | Light source | |
| 02 | Aluminum pencil or permanent marker | |
| 03 | Plier diamond cutter | |
| 04 | Trim saw Machine and blade as per requirement | |
| 05 | Template with difference 6, 4 and 2 in oval shapes | |
| 06 | Faceting unit machine for smooth work | |
| 07 | Leather/ Rubber lap with abrasive | |
| 08 | Grinding Machine with diamond grinding wheel | |
| 09 | Sprit lamp | |
| 10 | Doping wax and dope sticks | |
| 11 | Abrasive wheel, grit 400 and 600 "cut off disc" | |
| 12 | Aluminum pencil or permanent marker | |
| 13 | Pliers with diamond coated tips | |
| 14 | Auto cab Machine | |
| 15 | Tumbler machine | |
| 16 | Carving Machine | |
| 17 | Flexible shaft Machine | |
| 18 | Trim saw machine 6"-8" blade | |
| 19 | Diamond coated carving tools kit | |
| 20 | Flexible shaft Machine | |
| 21 | Clamping device for holding stone | |
| 22 | Small disk of silicon carbide | |

| 3. List of consumables | | |
|------------------------|---|-----------------|
| S. No | Name of Items | Quantity/Volume |
| 01 | Rough stone | |
| 02 | Sanding paper grit #180/#220/#260/#320 | |
| 03 | Wax | |
| 04 | Diamond Powder | |
| 05 | Chrome oxide, cerium oxide and aluminum oxide | |
| 06 | Cleaning cloth piece | |
| 07 | Stone for carving work | |
| 08 | China Clay | |
| 09 | Sanding paper waterproof (400, 600, 1000) | |
| 10 | Leather lap, rubber lap, buff | |