

LEATHERWORK 2

1. GENERAL COMMENTS

The standard of this year's paper is comparable to those of the previous years. The questions were clearly stated and simple to understand. Question 1, 3 and 5 were most popular to candidates and were answered very well.

The candidates' performance was above average.

2. SUMMARY OF CANDIDATES' WEAKNESSES

The Chief Examiner reported the strength of the candidates as follows;

- (i) Majority of the candidates were able to state and explain ways of caring for and maintaining tools as well as listing protective items that are used in a leather workshop as require in question 1.
- (ii) Most candidates adequately defined pelt and identify reasons for soaking skin during pre-tanning process in question 3.
- (iii) Most candidates were able to differentiate between cost and costing as well as identify and explain the factors that constitute the cost of a leather product as in question 5.

3. SUMMARY OF CANDIDATES' WEAKNESSES

The weaknesses of the candidates outlined by the chief examiner are:

- (i) Most candidates could not explain buffing and bleaching in question 2.
- (ii) Majority of the candidates could not describe the process of how a gusset is fixed on a leather bag in question 4(b).
- (iii) Most candidates could not explain the problems associated with the practice of leatherwork in Ghana as required in question 6.

4. SUGGESTED REMEDIES

The remedy suggested by the Chief Examiner include:

- (i) Teachers should teach students on the terminologies in leatherwork such as buffing, bleaching, kip, etc.
- (ii) Teachers should engage students in practical exercises and asked them to write the procedures into their books.
- (iii) Teachers should take students on fieldtrip to reputable leatherwork firms to know and understand the challenges that the firms go through.

5. DETAILED COMMENTS

Question 1

(a) Explain four ways of caring for and maintaining tools in a leather workshop.

(b) List three protective items that are used in the leather workshop.

The question 1 was popular to candidates. Very few candidates were able to give the points but could not explain the points. Most candidates answered the question satisfactorily.

(a) The expected answers:

- Sharpen cutting and piecing tools on oil stone(carborundum);
All cutting and piecing tools used in leatherwork should be periodically sharpened to prevent them from being blunt. The more tools are used, the blunter they become. Therefore, the leather artist needs to regularly sharpen all cutting and piercing edges in order to increase the efficiency of work.
- Re-facing mallet heads;
The heads of mallets become worn-out over time or receive several bruises causing the head to split and gets less effective or even dangerous to use. Mallet re-facing is necessary to prevent accident and damage at the leatherwork studio.
- Oiling metal parts of tools when not in use;
Metals are susceptible to rusting and corrosion when not in use. They have to be oiled and wiped with a clean cloth. Also, metal tools and tools with metallic parts should be kept free from water and other liquids since they trigger rusting and corrosion.
- Dress punching tools with sand paper and smooth files;
Punching tools easily wear out and become less effective due to the pressure. The bend or tilt cutting edges and heads should be straightened so that they can work well.
- Using the right tools for the right job;
The right tool should always be used for the right job in order not to spoil the edge of the tool and the material as well.
- Avoid the drop of tools on the floor;
Avoid dropping and leaving of tools on the floor to prevent damage to tools and accidents to humans.
- Keep tools in the appropriate containers/places;
Tools must be kept in their appropriate containers and storage areas when not in use to ensure safety and long life.

- Lubricate all moving parts of tools whenever necessary; The rate of wear and tear will increase so long as metallic parts of tools rub against each other. All the moving parts of tools and equipment should be oiled or greased to maximize their usage and to help prolong their lifespan.
- (b) The Expected answers include:
- gloves;
 - goggles;
 - apron/overcoat/overall;
 - thimbles/sailers palm
 - respirators
 - face shield
 - fire extinguisher
 - industrial boots

Question 2

Explain the following terminologies in leatherwork:

- (a) **Buffing;**
- (b) **Bleaching;**
- (c) **Grained leather;**
- (d) **Split leather;**
- (e) **Kip.**

Only few candidates attempted question 2. Some candidates could not explain the terminologies such as buffing, kip and bleaching. Other candidates could not give the name of the chemical used for bleaching in 2(b).

The following were the expected answers to the terminologies:

- (a) Buffing:

The process of removing/sanding the top grain layer via an abrasive or bladed cylinder to produce a velvet or fluffy surface on leather. The process is often carried out by a machine. Usually knife or abrasive is used to remove the minor blemishes (scars, tick bites, brands, etc.)

- (b) Bleaching:

- The process of making leather to become white or much lighter in colour by using chemicals such as oxalic acid or by exposing the material to sunlight.
- Bleaching is the process of lightening the colour of chrome leather by treating with oxalic acid.

- (c) **Grained Leather:** Any leather on which the original natural grain has been changed or altered by a method, process or manipulation. E.g. embossing, patenting. It is sometimes called fake grained. E.g. boarded leather, alligator grained, morocco grained, etc.
- (d) **Split leather:** It is what is left after the top grain is shaved depending on the thickness of the original hide, multiple splits can be cut from the same hide.
- (e) **Kip**
- It is the skin of an undersized animals such as lizard, rabbit, etc.
 - Skins from an animal of a bovine species between the sizes of a calf and an adult animal.
 - This is pelt or leather obtained from an immature bovine (calf).

Question 3

- (a) Define the term pelt as it applies in leatherwork.**
- (b) Explain each of the following pelt preservation processes:**
- (i) Wet salting;**
 - (ii) Brining;**
 - (iii) Pickling.**
- (c) Identify four reasons for soaking skin during the pre-tanning process.**

The question 3 was attempted by most candidates but some could not draw the difference between wet-salting and brining. Candidates interchanged the process of wet-salt with brining in 3 (b). Most candidates were able to define pelt in 3 (a).

The expected answers are as follows:

- (a) Pelt is defined as**
- an undressed skin or hide of an animal with its fur or hair still on.
 - the collective name for raw hides, skins and kips of animals.
- (b) The expected answers include:**
- (i) Wet salting**
- The pelt is washed after it has been placed hair down on a flat concrete surface. It is sprinkled with much coating of granular salt so that there is a thorough penetration of salt into all parts of the fibre. This curing process takes place at the slaughter house.
- (ii) Brining**
- It is a much faster method of curing and it is used by commercial firms using large vats called raceways. The pelts are allowed to soak in a salt solution called brine until they are completely saturated. At this point, the protein destroying organisms are no longer active.

(iii) Pickling

Pickling is the process of reducing acidity/ basicity of the pelt. The pickling of a pelt places it in a condition to receive and absorb the actual tanning agents. It is accomplished with variety of acids, the most common of which is sulphuric acid mixed with common salt. The pickling process is a form of preservation in itself and is the final step before the actual tanning.

(c) The expected answers include:

- Soaking helps in restoring some of the natural moisture lost during the curing process;
- It makes the pelt soft;
- It makes the pelt clean;
- Soaking helps in the removal of the salt from the pelt;
- It helps to restore pelt to natural condition;
- Soaking helps in the removal of lime after deliming;
- It helps to prepare the skin for tanning.

Question 4

(a) Explain fabrication as used in leatherwork.

(b) Describe how a gusset of a bag is fixed.

Most candidates had explicit knowledge about fabrication as used in leatherwork in Question 4 (a) but lacked knowledge about how a gusset of a bag is fixed. Candidates were explaining what a gusset is and writing on the functions of the gusset instead of the process of how the gusset is fixed to a bag as required in Question 4 (b).

The expected answers

(a) Fabrication is the act of constructing, forming, fashioning or making leather articles with leatherwork tools and materials using the appropriate techniques.

(b) Candidates were expected to follow this process:

Material and tools: cardboard, knife, tracing wheel, leather, etc.

Process:

- Make preliminary design of the gusset and select the appropriate design for the bag.
- Trace the design on to the leather to be used for the gusset.
- Cut the design from the leather according to the pattern, ensure precise cutting to avoid misalignment during assembling.
- Ensure the gusset dimensions are accurate and fit the intended design.

- Pin or paste the gusset to the main parts. Make sure they align correctly with the bag's edges.
- Sew / thong the gusset to the main parts using a sewing machine or strip of leather.
- Align the gusset with the bag's main body, ensuring it is evenly distributed and fits well.
- Securely sew the gusset to the main body of the bag, typically starting from one end and working around. Reinforce the corners and seam intersections for added strength.
- Trim any excess fabric or threads to ensure a clean finish.
- Press the seams and gusset with an appropriate tool to remove any wrinkles and ensure the gusset lies flat.
- Examine the bag for any flaws with the gusset attachment, such as loose stitches or uneven edges.
- Test the bag for functionality to ensure the gusset provides the desired shape, space and strength.

Question 5

(a) Differentiate between cost and costing.

(b) Identify and explain the two main factors that constitute the cost of a leather.

(c) Mention one basic strategy for marketing leather products.

Most candidates did very well because they had explicit knowledge about cost and costing in Question 5 (a), except few candidates who became confused and interchange the meaning and explanation of fixed cost and variable cost in Question 5 (b).

(a) The expected answers include:

- Cost refers to the amount of money spent or required to produce, purchase or maintain leather product, whilst costing refers to the process of determining the cost of leather product.
- Cost is a specific amount of money associated with a particular item, service or activity whilst costing involves calculating, estimating, or analysing the costs associated with a product, service or activity.
- Cost is often used to describe the expense or expenditure related to a specific transaction or event, whilst costing is a methodology or technique used to arrive at a cost figure, taking into account various factors like materials, labour, overheads.

(b) Factors that constitute the cost of a leather product are:

- Variable cost;
- Fixed cost.

Variable cost: This is also known as direct cost or production cost; it consists of raw materials and wages. Variable costs are the direct cost for making leather articles. They are called variable because the cost of materials for producing ten items a day is different. From the cost of producing twelve or twenty items a day. The cost varies.

Fixed cost: This is also known as indirect cost or overhead costs which consist of rent, lighting cost, taxes, cost of adverts, depreciation cost of tools and equipment, telephone costs, transportation, etc.

It consists of costs that are not directly related to the production process.

(c) Basic strategies for marketing leather products include:

- Door to door
- Whole sale
- Retail
- Online/internet
- Advertisement through:
 - Flyers
 - Bazaars
 - Poster
 - T.V.
 - Radio
- Exhibitions/Bazaars/Fairs etc.

Question 6

Explain five problems associated with the practice of leatherwork in Ghana.

Candidates who attempted Question 6 were able to identify the various problems, meanwhile few of them could not explain the points raised well.

The expected answers:

- Lukewarm attitude towards livestock production: Most Ghanaians are farmers, yet those who delve into animal production are just a handful. For this reason, there is pressure on the few animals raised by the very few livestock farmers.
- Lack of governments' commitment to the development of the industry: Due to the unconcerned stance of government towards the few existing local leather industries, nothing is done by governments to sustain the industry.

Tanneries, once upon a time were situated at open places and tanners had a lot of space for pre-tanning and post-tanning activities. The story cannot be said of tanneries today. Chiefs and landowners have sold out lands hitherto used for tanning and leather preparation, causing them to shrink.

The Majeema Tannery in Tamale, one of the most popular tanneries in Ghana, is gradually nearing extinction due to unavailability of a demarcated land by government for the tannery. All the land around this tannery have been sold out to individuals for residential purposes.

- Challenge of Lack of confidence in made-in-Ghana leather products: Some consumers want to hear big names like made in Italy, made in Germany, made in Britain etc. So, they feel reluctant to buy products when they hear 'Made-in-Ghana' This attitude affects the local industries and prevents them from growing.
- Challenge of Noncompliance with hallmarking requirements: Some artisans are not able to meet requirements for international trade. For this reason, their industries are only able to satisfy the local market.
- Improvisation of leatherwork tools: Local Leather workers usually improvise tools, which may not work as expected, it may therefore affect the quality of the works they produce.
- Lack of capital: Many of our local artisans produce only of subsistence scale, and do not have the requisite capital to do anything meaningful. They are always therefore at marking time, and this is not good for business.
- Inadequate training centres: Apart from the few schools that have leatherwork as part of their curriculum, there is virtually no institution established for the study of leatherwork. The few people turned out of these institutions are therefore insufficient to satisfy the entire consumer population. They have little or no chance of further training to improve their knowledge and expertise.

Smart Learning Tools

LEATHERWORK 3

Question 1

Using marbled leather, design and produce a rack with two compartments for holding wine bottles. The rack should have an inscription “COCKTAIL”.

Using any suitable technique. It should have a stiffener, a suitable hanging device, thonged edges and lacquer finish.

Measurement: 40 cm long

Demands

The final sketch should be translated into leather wine rack using appropriate tools/equipment, materials and techniques as follows:

- (i) Tools/equipment: e.g. scissors, needle, scorching rod, awl, thonging chisel, brushes, Hitting tools, tape/ruler, bonefolder, etc.
- (ii) Materials: marbled leather, ink, cord, thong, glue, thread, rings, stiffener, fabric lacquer/thinner, etc.
- (iii) Preparation of materials: measuring and cutting of leather and stiffener to size, measuring and cutting thongs, etc.
- (iv) Construct leather rack by:
 - making inscription by writing, peeling, relief modelling or appliqué, etc.;
 - assembling stiffener and lining;
 - assembling parts;
 - making holes/slits for thonging;
 - thonging the edges;
 - attaching hanging device;
 - applying lacquer.

Performance

Question 1 attracted majority of the candidates. Most of them managed to acquire variety of tools on their own and used them well to provide the features demanded by the question.

However, some candidates were faced with challenges in dyeing of leather and fixing attachments to the wine rack.

Question 2

Using natural leather, design and produce the hunter's quiver. The quiver should have embossed and scorched designs depicting hunting activities.

Measurement: Diameter – 10 cm

Length/Height – 35 cm

Finish appropriately.

Demands

The final sketch should be translated into hunter's quiver by using appropriate tools/equipment, materials and techniques as follows:

- (i) Tools/equipment: e.g. knife, needles, awl, mallet, soldering iron, thonging chisel, bone folder, foam, etc.
- (ii) Materials: e.g. natural leather, rings, glue, thread, thongs, reinforcing material, lining/fabric, buckle, etc.
- (iii) Preparation: measuring and cutting leather parts to size, transfer design onto the support, etc.
- (iv) Construct quiver by:
 - Embossing and scorching the hunting scene.
 - Reinforcing and lining;
 - Assembling various parts by glueing, thonging or sewing;
 - Fixing carrying device;
 - Finishing appropriately.

Performance

It was observed that intricate and detailed designs were successfully achieved on most of the candidates' works.

Leatherwork is becoming more attractive to candidates and skills in thonging, embossing, sewing and dyeing keep improving each year.