

BDT (VISUAL ART) PAPER 2

1. **GENERAL COMMENTS**

The 2011 Basic Design And Technology Visual Art Examination compares favourably with that of 2010. The questions were based on the prescribed syllabus. Generally there has been a slight improvement in the performance of candidates this year. Some candidates performed well above average while others performed miserably.

2. **A Summary of Candidates' Strengths**

- * Improvement in knowledge of subject matter.
- * Candidates' strengths were evident in their answers to question 2 where some candidates were able to score full marks and others also scored their highest marks.
- * Their strongest areas were the communication products and practical block lettering.
- * The extraction of dyes and the dyeing processes were also areas where candidates performed well.

3. (a) **A Summary of Candidates' Weaknesses**

- * Inability of candidates to read and understand the questions.
- * Lack of adequate knowledge about the subject matter by some candidates.
- * Inability to understand and explain technical terms and describe processes step by step.
- * Inability to draw simple tools like scissors and mallet.

(b) **Suggested Remedy for the Weaknesses**

- (1) There should be intensive in-service training of teachers on the Basic Design and Technology syllabus.
- (2) Teachers should get acquainted with syllabus and examination requirements.
- (3) There should be adequate teacher preparation at the pre-service level. This should be at the policy level with the Ministry of Education, Teacher Education and Curriculum Division of the Ghana Education Service as key players.
- (4) There should be an intensive remedial programme to improve literacy generally at the J.H.S. level to take care of poor spelling, poor expression and construction. The BDT examination should be directed more towards the testing of practical work. Drawing should be vigorously pursued.

4. **DETAILED COMMENTS**

Question 1 (a) **State three characteristics of a good plain seam.**

Majority of candidates were able to answer the question, but their

answers were limited e.g. it should be suitable for the type of fabric/garment, should be neat, it is strong and seam should be straight.

Few candidates stated the method for making a plain seam, while others too wrote names of seams, e.g. french seam, overlaid seam.

Few candidates stated in their answers that 'it makes the seam strong; it makes the seam flat' meaning that the characteristic makes the seam either strong or flat.

Other correct Answers

- * It should be pressed open/flat.
- * It should be firmly stitched.
- * Seam allowance should be even.

(b) **State three causes of food spoilage.**

Most candidates did answer it well. Some candidates gave micro-organism and their examples e.g. - (i) micro-organisms (ii) yeast (iii) moulds, (iv) bacteria.

This showed that either they could not differentiate between these or did not understand that part of the topic well.

Majority of candidates knew about the enzyme action and oxidation apart from the micro-organisms and their examples.

Few candidates remembered the weevils, bugs, worm, fruit flies and moths/(insects). Some candidates also gave answers such as 'heat the food', 'do not put your hand in the food and, 'cook/heat food properly.

Causes of Food Spoilage

- * Micro-organisms e.g. yeast, moulds, bacteria, fungi.
- * Oxidation/mechanical damage/cuts.
- * Insect damage e.g. ants, fruit flies, bugs, weevils
- * Worms.

(c) **Complete the table below by filling in the blank spaces**

Colour	Association in Nature	Symbolism
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Example Red	Blood	Danger
	Sky	
White		
		Decay
	Past History	Mourning

* Majority of the candidates understood the question and gave correct answers which were not varied for the association in nature and symbolisms e.g. for sky which is blue the symbolisms were love, royalty, calm, peace. White - Association in Nature, egg shell, cotton, snow. Symbolisms - joy/happiness, victory. Brown for decay and association in nature - soil land/earth.

* The few candidates who could not reason to select the correct answers put in their own colours, association in nature and symbolism.

Colour	Association in Nature	Symbolism
Blue	Sky	Early dawn, female tenderness, serene appearance, rule of a queen
White	Ice, white clay/kaolin	Purity, virginity,

		faultlessness
Brown	Dried leaves, bark of tree, rotten object.	Decay
Black	Past History	Mourning

(d) **The Headmaster of your school has asked you to design and construct a Kumasi Ventilated Impromement Pit (KVIP)**

(i) **List three building materials you will use in making the structure.**

- * Majority of candidates had the question right even though the answers were not varied e.g. cement, sand, water.
- * Few candidates were confused and could not differentiate between the materials and tools, therefore, either gave answers for tools e.g. shovel, spirit level or mixed the tools with the materials in their answers.

Some correct Answers for the Question

- * Float - Gauge box - Gauge rod - Builder's square.
- * Tape measure - Line and pin.
- * Straight edge - Brick hammer.

Question 2

(a) **What are the uses of the following Visual Communication Products? They are for:**

- (i) Paintings: Beautification, Recording, Preservation, Therapeutic Purposes (Healing emotional disorders).
- (ii) Sign Post: Direction, Warning, Information.
- (iii) Books: Recording, Record keeping, Education,

- Entertainment, Information, Acquiring knowledge etc.
- (iv) Logo: Identification, Legal Protection (copy right), Information, Symbol of authority.
- (v) Bill Boards: advertisement, Information (Messages) etc.
- (b) **Name two principles of Design.** They are:
- (i) Harmony, Repetition, Rhythm, Unity, Balance Contrast, Variety, Scale, Proportion, Dominance, Movement.
- (ii) **Draw and name two basic shapes in the spaces provided below.** They are:
Circle, Oval, Triangle, Square, Rectangle etc.
- (iii) **Name the two types of texture.** They are:
Actual (tactile) and Visual (simulated)
- (c) **Use the grid provided below to write “KADE” in block letters.**
- (d) **Write the names of the colours marked in Figure 1.**
They are:
(i) Orange (ii) Violet (iii) Green (iv) Yellow.
- (e) **Which colour is complementary to (iv)?** It is violet.

Candidates generally performed very well. Some candidates scored full marks. Some candidates used shading and colouring techniques to highlight the letters in the word KADE. However, some candidates did not understand basic shapes. Perhaps, geometric shapes could have helped.

They drew trees. Others have not understood the colour cycle, its various segments and also colour terminology like opposite colours, complementary colours, the primaries and the secondaries. At the J.H.S level the six-point colour wheel must be taught and applied.

It is surprising that some candidates cannot differentiate between principles and elements of designs.

SECTION B
PART 1
WEAVING AND STITCHING

- Question 3 (a) **Name the tools illustrated below and state one use of each.**
- (i) Bent Bodkin: It is used for boring holes, piercing, stitching, splitting fibres and leaves.
- (ii) Round-Nosed Pliers: It is used for bending, holding, squeezing and pulling wires.

- (iii) Shears: For cutting stakes/wires.
- (iv) Chisel: For cutting or carving.
- (v) Flat File: For abrading/cutting, smoothing.

(b) Explain in five steps, how straw is processed for weaving. The question demands the following:

- Step 1. Harvest the straw.
- 2. Cut off seeds and unwanted parts.
- 3. Wash them with water.
- 4. Spread to dry.
- 5. Split straw into strands.
- 6. Roll into ropes.
- 7. Dye some of them.

(c) **State one use of each of the following products in the spaces provided in the table below.** The question demands the following:

- Curtains: for official/domestic items, beautification/decoration,
- Socks: for comfort, protection, warmth, beautification.
- Purse: for safety of money, keeping money.
- Finishing net: for harvesting/trapping fish.
- Basket: carriage, packaging, storage, shopping, harvesting, used as a container.

Most candidates performed badly especially with the identification of the tools in (3a). Perhaps, candidates could have handled line drawings of tools better. Most candidates were also not familiar with the preparation of materials (straw). They were however able to handle question 3(c) better.

Question 4 (a) **Fill in the blank spaces with the words listed below to complete the passage on track border weaving:
stake, wale, bend, stakes, height, split**

To weave a track border, take the first double STAKES and BEND them down at a HEIGHT of about 5/8 of an inch of the WALE. Pass it behind one STAKE and in front of two, leaving the ends inside.

(b) **Identify the weaves that have been labelled in figure II.**

- (i) PLAITED BORDER.
- (ii) SLEWING WITH A DYED CANE.
- (iii) CHAIN WEAVING.
- (iv) RANDING.
- (v) THREE-ROD UPSETTING.

Question 4 (c) **Explain the following:** The demands of this question are:

- (i) Randing means weaving with one weave.
- (ii) Coiling is described winding/rolling of Ropes/Fibre while stitching.
- (iii) Weavers are finer strips which are woven round the stakes.

- (iv) Slewing means using the three weavers to interweave.
 - (v) Spokes are thick upright Poles of a Basket around which the finer strips (weavers) are woven. They are also known as stakes.
- (d) (i) **The processes involved in weaving in order to produce a fabric are:**
Shedding, PICKING and BEATING-UP/WEAVING
- (ii) **Write down three skills a visual art student will acquire, studying weaving and stitching.** They are:
- * Preparation of materials e.g. cane, bamboo.
 - * Coiling and stitching e.g. macrame, knotting in bags and baskets.
 - * Construction e.g. warping, weaving.

Candidates performed very badly in 4a, b, c and d. Most of them did not know what a track border is. They could not identify the processes in figure II. Perhaps, a line drawing of the basket could have worked better. It is surprising that candidates could not explain basic terms like randing, coiling, weavers, shedding, picking etc. either due to lack of subject matter or poor language skills.

PART II MODELLING, CASTING AND CARVING

- Question 5 (a) (i) **What is Finishing?**
Finishing is a final treatment given to a product to enhance its appearance and durability.
- (ii) **List and describe three basic steps in finishing wood carving.**
- Texturing: Creating tool marks on wood carving as a finishing.
Sanding: Using an abrasive to render the surface of wood carving smooth.
Lacquering: Application of liquid finish to improve texture.
Burning: Creating design by using fire.
Scorching: Creating design on a surface with a hot metal tool.
Burnishing: Polishing surface with fingers and soft cloth.
Waxing: Polishing with wax.
Painting: Application of colour to a surface
- (iii) **Give three reasons for applying a finish to a carving.**
They are:
- * Adding value.
 - * Making carving attractive.
 - * Identification of product.
 - * Making carving durable.
 - * High income generation.
 - * Boosting export.

Question 5 (b) **Match the following tools with their functions below.**

Bodkin, Ruler, Clamp, Mallet, Ha
BODKIN - Boring tool.
HACKSAW - Cutting.
ROUND PLIERS - Bending
MALLET - Striking.

(c) **State the importance of carving, modelling and casting under the following areas:**

- (i) SOCIAL: Beautification of the environment, Therapy (used in curing certain emotional conditions).
- (ii) ECONOMIC: Income Generation, Foreign exchange earning, Tourism Promotion.
- (ii) CULTURAL: Self Expression, Religion, Promotion of Art Appreciation. The use of objects in our cultural practices.

Question 5(a) i, ii, and 5(c) were attempted by most candidates. They were able to write the definition for finishing, gave reasons for applying a finish to a carving and also stated the social, economic and cultural importance of carving, modelling and casting. Obviously, candidates were not familiar with the basic tools used in the basic processes in the subject area since they performed rather poorly in question 5(b). Candidates also found question 5(a) (ii) difficult since they could not identify and describe basic processes like texturing, sanding, lacquering etc.

Question 6 (a) **Match the terms below with the appropriate definitions.**

CASTING, CARVING, IN-THE-ROUND, MODELLING, RELIEF.

- (i) Substraction process in sculpture - CARVING.
(ii) Creating sculpture in a mould - CASTING.
(iii) Three-dimensional form on a flat surface - RELIEF.
(iv) Additive process in sculpture - MODELLING.
(v) Free standing sculpture - IN-THE-ROUND

(b) **State one use of each of the following tools below.**

Knife - for cutting, Adze - Blocking wood.
Hacksaw - cutting Metals, Axe - cutting pr splitting wood.
Spatulla - Modelling Plastic, Mould - to give form to liquid or

semi liquid materials.

(c) **Describe the dry method of preparing clay in five steps.** They are:

- Step 1. - Gather pestle, mortar, bowls, sieve etc.
2. - Collect dry clay and put into mortar.
3. - Pound with pestle till it becomes powder.
4. - Collect the powdered clay into a bowl.
5. - Sieve to remove unwanted particles.

(d) **List five materials that can be used in modelling, casting and carving.**

- (i) Plaster of Paris (POP).
- (ii) Clay/Plasticine.
- (iii) Wax.
- (iv) Sand.
- (v) Cement, soap.

Most candidates attempted all aspects of the question i.e. 6a, b, c and d and did well. However, some had problems with 6(a) and 6(c). There was a lot of guessing in 6(a). It appears some candidates misread the question. They did not see the word 'dry.' They must have read 'method.' Therefore they described the wet method. Perhaps, the word 'dry' should have also been emphasised.

PART 3
CONSTRUCTION AND ASSEMBLAGES

Question 7 (a) (i) **What is an adhesive?**

It is a substance or a material used to hold two or more parts together e.g. glue or cement.

(ii) **State two adhesive that are required for wood, paper or plastics.**

They are glues, cement etc.

(b) **Outline five steps in bonding wood scraps.** They are:

- Step 1. - Clean parts by dusting etc.
2. - Apply the adhesive.
3. - Allow adhesive to dry a little.
4. - Assemble Parts (clamp where necessary).
5. - Allow adhesive to cure and unclamp.

(c)(i) **List three common assembling techniques used in construction.**

They are:

- * Mechanical Fastening - e.g. seams (interlocking the edges of materials).
- * Adhesive Bonding e.g. glues and cement.
- * Assembling with fasteners e.g. (thread fasteners - rivets, pins, retaining rings stitches).

(ii) **State two benefits that the society will derive from creating art with scraps. They are:**

- (i) Will be able to Recycle scraps to produce sculpture.
- (ii) Sculpture (assemblage) produced can be used to decorate the environment.
- (iii) There will be job opportunities in the society.
- (iv) The society will be aware of the value of some waste as means of creating jobs and earning income.

(d) **Identify and describe two skills needed for working with plastic clay.** For example: KNEADING: Using the fingers to work clay to consistency.

- (i) Soaking: Putting clay in water to make it soft.
- (ii) Pounding: Breaking Lumps of clay into smaller bits.
- (iii) Sieving: Separating larger particles of clay from smaller ones.
- (iv) Wedging: Cutting and hitting clay on hard surface to remove air bubbles.

Candidates generally performed poorly. They have not learnt about the basic tools, materials and the processes in subject area. most candidates could not handle some terms, techniques and processes which are basic in this area. They are adhesive, bonding, assembling, wedging etc.

Question 8 (a)(i) **What is construction and assemblage?**

- * It is a process of putting together found objects/odds and ends with any suitable bonding techniques.
- * Assemblage: Deals with pre-existing forms.
- * Construction: Found objects are altered to give a desired effect.

(ii) **Outline five steps to which metal scraps are put together.**
They are:

- Step 1. Collecting variety of scraps and selecting to suit specific task.
2. Cleaning surfaces to be bonded by sanding, scraping etc to remove finish.
3. Select a suitable bonding technique e.g. welding

(for heavy metals)

4. Bring cleaned surfaces together and weld.
5. Chase and polish.

(b) **Match the materials listed below with the appropriate bonding techniques.**

- | | | |
|-------|--------------|---|
| (i) | Soft metal: | Soldering, Glueing, Folding, Riveting. |
| (ii) | Heavy metal: | Welding, treaded fasteners (Bolts - nuts) |
| (iii) | Wood: | Wood screws, glue, nails. |
| (iv) | Plastics: | Adhesive, heating, pressing. |
| (v) | Ceramics: | Glue and cement. |

(c)(i) **Wood and plastic scraps are prepared for bonding by**

Shaping, Scraping, Sanding to remove dirt.

(ii) **Why are plastics and metal parts sanded before bonding?**

To remove finish so that parts can adhere to each other well.

(iii) **Mention two techniques of finishing an assemblage.**

They are painting, chasing or polishing.

(d)(i) **What are rivets?**

They are metal pins which are used to permanently assemble parts.

(d)(ii) **Describe three steps in riveting.**

- Step 1. Drill a hole through parts.
2. Force the rivet through the holes in the two layers of the materials so that they are tight together.
3. Upset rivet to enlarge its chamber by squeezing or hammering until a head is formed on the shank end of the rivet.

Most candidates generally performed badly. They were not able to describe their area of study i.e. construction and assemblage. They were also not familiar with the basic tools, materials as well as the processes which result in the various artifacts. They were also not familiar with the technical terms in this area.

FABRIC AND LEATHER DECORATION

Question 9 (a) **Explain the following:**

- (i) Materials
- (ii) Tools

Materials are items which form part of a finished product or artwork.
Tools are items which help the artist to produce the artifact.

(b) **Draw the tools listed below.**

- Tools: * Mallet
* Revolving Punch
* Pair of scissors

(c) **The Passage below describes how the primitive man survived in his environment. Use the words provided below to complete the passage.**

WORDS: SURVIVE, SKIN, HUNTING, SPRINGS, MAN,
THORNS, PERIOD, CLOTHING, TIE, WATER, SOCKS.

When the primitive MAN learned to TIE a hard piece of SKIN around his feet to protect them from stones and THORNS he increased his HUNTING speed; Leather CLOTHING allowed him to SURVIVE the weather better. When he learned to put WATER in skin bags, he could then travel without returning to rivers and SPRINGS for longer PERIODS of time.

(d)(i) **List any three ways of decorating fabrics.**

Candidates were expected to list any three of the following:

Printing, Dyeing (tie-dye, batik) Embroidery/Applique, Stitching.

(d)(ii) **Write down two techniques used in fixing patterns in applique.**

Candidates were expected to explain the ONLAYING and the INLAYING techniques i.e. Onlaying: Pattern/motif is placed on ground fabric (support) and stitched. Inlaying: Ground fabric is cut and motif is placed under the ground fabric and stitched.

Candidates performed well by giving appropriate explanation to show the difference between materials and tools and also by filling in the passage in 9c correctly. However, drawing in 9b was poorly done generally especially the scissors. Some candidates misunderstood 9d(i). They described styles of designing. It appears Applique as a topic in the syllabus has not been dealt with in many schools.

Question 10 (a)(i) **What are dyes?** Answer: They are substances which can impart colour permanently to a fabric.

(ii) **Describe how any natural dye is produced from the bark of a tree.**

- Answer: *
- * Collect and clean bark of tree
 - * Soak, pound, grind bark, mix with water and boil.
 - * Strain the liquid.

(iii) **Name any two tools and two materials for dyeing.** They are:

Tools: Bowl, Spoon, Stirrer, Bucket, Gloves.

Materials: Dyes, fabric, chemicals e.g caustic soda, salt.

(iv) **Name and describe two RESIST DYEING methods.** They are:

Tie Dye: Folding, Marbling, Tying etc. fabric and dyeing to produce

Batik patterns: Waxing OR stamping fabric, dyeing and dewaxing to create patterns.

(b)(i) **Give two reasons for decorating fabrics.** They are:

Make them beautiful, attract the buyer, add value, improve quality.

(ii) **What is tanning?** It is the process of turning hides/skins into leather. OR processing hides and skins to prevent decay and make them permanent.

(iii) **List two methods of tanning.** They are: Vegetable and chemical e.g. chrome.

(c)(i) **What are stitches?** Stitches occur when a threaded needle passes in and out of an article/fabric. They may be worked by hand or machine.

(ii) **Identify the type of stitches shown in the table below.**

- They are:
- * Oversewing or overcast stitches.
 - * Cross stitches.
 - * Running stitches.

Candidates performed satisfactorily. Their strongest areas were Question 10a(i) to (iv) and also 10b(i). Most candidates could define dyes, list tools and materials for dyeing, give reasons for decorating fabrics as well as describing the resist dyeing methods.

It appears the Leatherwork and stitches aspects of the Fabric and Leather Decoration of the syllabus have been played down by teachers. Most candidates could not define tanning or list methods of tanning. Most candidates could not identify the stitches illustrated in 10c(ii)