

BASIC DESIGN AND TECHNOLOGY

(PRE-TECHNICAL SKILLS) 2

1. **GENERAL COMMENTS**

The questions were within the scope of the syllabus. The difficulty and knowledge levels were suitable and within candidates' abilities to excel.

Candidates' performance did not indicate any variations from the previous year.

2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (1) There was improvement in the organization of candidates' answers. They allowed enough space in between questions and sub-questions. Question numbers were boldly written against their answers.
- (2) Candidates made frantic effort to have balanced attempt of all questions and that yielded good results.
- (3) Some answers provided by candidates showed that they had prepared adequately and had fair knowledge of the subject matter.

3. **SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Candidates demonstrated poor skills in sketching and identification of tools.
- (2) Candidates were not accurate and precise in explaining technical terminologies.
- (3) Some candidates deliberately answered questions more than required as if they had more time than necessary and scored low marks for their answers.
- (4) There was a poor display of pencil work. The correct thickness and faintness of lines were not strictly applied.
- (5) Some candidates' spellings were bad.

4. **SUGGESTED REMEDIES**

- (1) Sketching, using techniques such as crating or boxing to draw in isometric,

oblique and perspective should be encouraged.

- (2) In the teaching of the subject, practical demonstration should be shown to students. Various types of tools and equipment should be shown to student and they should be trained to make freehand sketches of these tools and equipment.
- (3) Adequate exercises should be given to students in orthographic projection stressing on pencil work. Lines should be used appropriately and teachers should ensure that relevant drawing equipment is used.
- (4) Candidates should read the textbooks often to familiarize themselves with spelling of certain technical terminologies.

5. **DETAILED COMMENTS**

QUESTION 1

- (a) **State three characteristics of a good plain seam.**
- (b) **State three causes of food spoilage.**
- (c) **Copy the table below and fill in the blank spaces.**

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

- (d) **The Headmaster of your school has asked you to design and construct a Kumasi Ventilated Improvement Pit (KVIP) toilet for the school.**
 - (i) **List three building materials you will use for making the structure.**
 - (ii) **List four tools for constructing the walls.**

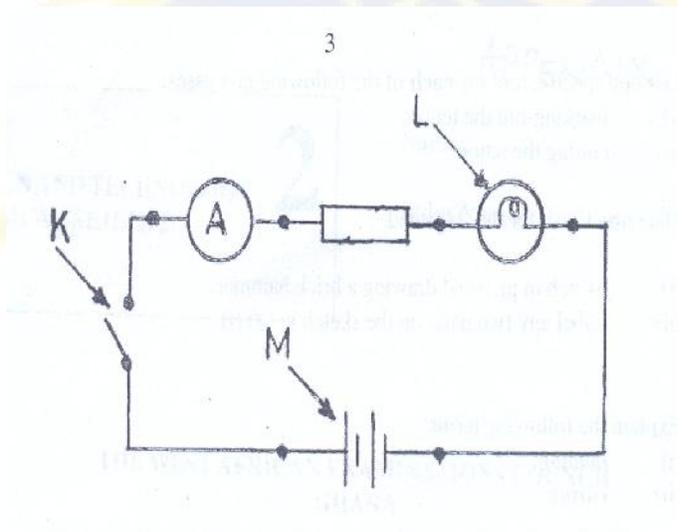
- (a) Performance of candidates in this question was satisfactory. A few of the candidates lacked knowledge concerning the characteristics of a good plain seam and therefore failed to provide the correct responses. Some of the

characteristics of a good plain seam include firmly stitched, strong and straight and even allowance.

- (b) Candidates did well in answering causes of food spoilage by providing correct answers like micro-organisms, yeast, bacteria, mould, insects, weevils and worms. However, a few of them mis-understood the question and provided wrong answers like not heating food, leaving food uncovered and storing food at unsuitable places. Candidates should note that these are not the agents that cause food spoilage.
- (c) Candidates were able to associate colours with nature and indicated the corresponding symbolisms. There were some candidates who could not identify things in nature associated with white and brown colours.
- (d) Candidates' performance was exceptional in this question as they provided the correct building materials and tools for the construction of a KVIP.

QUESTION 2

- (a)
 - (i) Explain the term draw filing.
 - (ii) sketch the triangular file.
 - (iii) Label any two parts on the sketch in (a)(ii) above.



- (b)
 - (i) Identify the items labelled K, L, M in the circuit diagram above.
 - (ii) List two examples of electrical conductors.

This was the least attempted question by candidates. Those who attempted the question favourably satisfied the requirements of the marking scheme and scored good marks. Some candidates could not sketch the pictorial drawing of a brick hammer and labeling of its parts was also poorly done. This shows lack of adequate skills in sketching by candidates.

QUESTION 4

- (a) **Explain the following terms:**
 (i) **pinning;**
 (ii) **curing.**
- (b) (i) **Make a freehand sketch of an outside callipers.**
 (ii) **State one use of the outside calipers.**
- (c) **State one use each of the following measuring tools:**
 (i) **steel rule;**
 (ii) **tape measure.**
- (d) **State two methods each for maintaining the tools stated in (c) above.**
- (e) **Copy and complete the table below:**

Process	One tool used
(i) Plumbing a wall.	
(ii) Checking corners of a wall	
(iii) Measuring aggregates	
(iv) Checking courses of a wall	
(v) Picking and spreading mortar	
(vi) Mixing mortar	

Many candidates showed lack of understanding in explaining the terms pinning and curing.

Pinning is the clogging for file teeth with metal filings when filing soft metals thus rendering the file ineffective in the metal removal process.

Curing is keeping cement products damp.

Though the freehand sketching of the outside calipers was correctly done by candidates, they could not state its use.

Candidates did well by copying and completing the table.