

BASIC DESIGN AND TECHNOLOGY
(PRE-TECHNICAL SKILLS 2)

1. **GENERAL COMMENTS**

The standard of the paper compared favourably with that of the previous years. The questions were within the scope of the syllabus.

The performance of candidates was very good compared as with that of the previous year.

2. **SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Most candidates answered the question 1 which covered the core skills very well.
- (2) Most candidates demonstrated very good draughtsmanship skills.
- (3) Candidates presented proportional sketches in pictorial views.
- (4) Some candidates' responses indicated that they had prepared adequately and had good knowledge of the subject matter.
- (5) Most candidates followed the logical tabular presentation of solutions to headed questions.

3. **SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Some candidates wrote the names of the parts of the tool they drew under the tool instead of labelling them on the tool.
- (2) Majority of the candidates lacked the basic principles of orthographic projections.
- (3) Most candidates' responses showed that they lacked knowledge in basic technical skills.
- (4) A few candidates produced poor sketches of the bolster and the spirit level.
- (5) Some candidates did not number their responses.

3. **SUGGESTED REMEDIES**

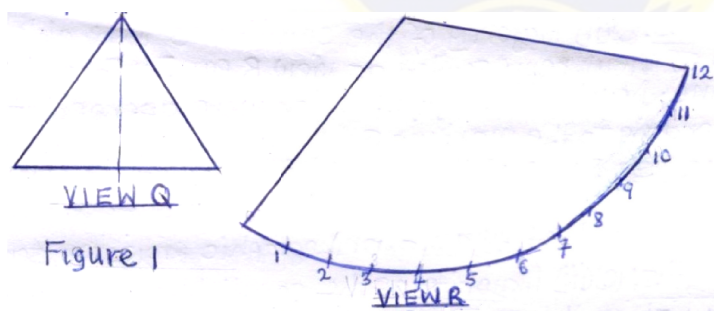
- (1) Candidates should be given adequate exercises in orthographic projections to practice.
- (2) Education authorities should ensure that schools have qualified technical teachers teaching the subject.

- (3) Candidates should develop the habit of reading textbooks, pamphlets and materials related to basic technical skills.
- (4) Candidates should be sent on excursions to sites and taken through practical exercises to improve their knowledge and skills.
- (5) Candidates should practice with the appropriate drawing instruments and equipment.
- (6) Teachers should guide candidates on how to answer questions appropriately.

5. DETAILED COMMENTS

Question 1

- (a) List two uses of a table napkin.
- (b) State four causes of food spoilage.



- (c) **Figure 1 shows two views of a solid.**
 - (i) Name the type of solid represented as view Q.
 - (ii) State the type of view represented as R.
 - (iii) List any three equipment that are used to draw the views Q and R.
- (d) **(i) List the primary colours.**
(ii) Name four types of line.

- (a) Very few candidates were able to state the correct answer. Most candidates' stated wrong responses such as used to clean tables and floors; for removing hot pans from fire, etc.

The required answers include; to wipe the mouth during and after eating; to cover attire/dress in order to prevent staining; to wipe hands after eating and washing.

- (b) Most candidates answered this question very well.
- (c) Most candidates were able to answer the first part very well but could not answer the second part. The expected answer for question (cii) is surface development of a cone.

Listing the equipment used for drawing the cone was the most popular question. All the candidates were able to state the correct instruments.

- (d) Many candidates provided appropriate responses to question d(i). However, most candidates were not able to answer question d(ii) to satisfy the demands of the marking scheme. Most candidates applied their knowledge of types of lines in pre-technical skills to answer the question.

Some of their responses were however not captured by the marking scheme because the question was a visual art question. The expected answers include; curved lines, horizontal line, oblique/slanted line, etc.

Question 2

(a) (i) State three uses of mortar.

(ii) List three tools used for moulding bricks.

(b) (i) Make a sketch of a spirit level.

(ii) State one use of the spirit level.

(iii) State two care and maintenance measures to be observed when using the spirit level.

(c) (i) List two types of screw drivers.

(ii) State one use of a screw driver.

(a) Most candidates who attempted this question answered the first part very well. The responses for the a(ii) was however mixed. The expected answers include; mould box, tamping rod, gauge box, spade/shovel, etc.

(b) (i) Most candidates lacked the skills of freehand sketches and as such could not sketch the spirit level very well. The required sketch is as follows:



A Sketch of a Spirit level

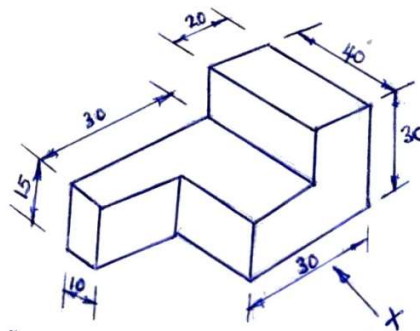
- (ii) Most of the candidates who attempted this question answered it correctly.
- (iii) Most candidates could not provide the correct responses to this question. The required answers include; should not be dropped; should be used for the right job; should be cleaned occasionally.

- (c) Some candidates listed types of screws instead of types of screw drivers. The expected answers include; flat/London pattern, star/Philips.

Candidates who were able to list the types of screw driver were able to state its use. Those who could not were not able to state the use. Screw drivers are used for screwing and unscrewing.

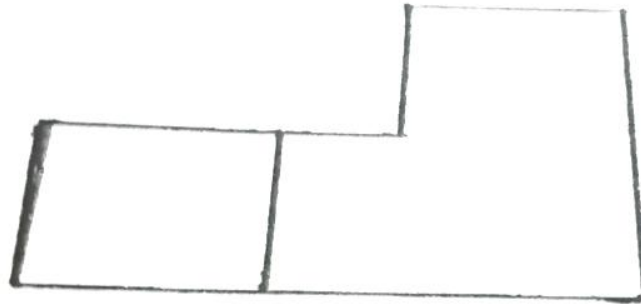
Question 3

Figure 2 shows the pictorial view of a block prepared from odum. Use it to answer question (a)(i) to (a)(iii).



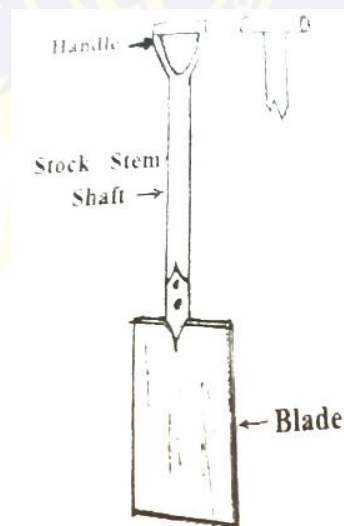
- (a) (i) Draw full size the view in the direction of arrow X.
- (ii) List three tools required to prepare the wooden block.
- (iii) List two finishes that would be applied to make the wooden block attractive.
- (b) (i) Make a freehand pictorial sketch of a spade.
- (ii) Label any two parts of the spade sketched in question 3(b)(i).
- (iii) State two uses of the spade.

- (a) Most of the candidates who attempted this question could not do a very good work. A few wasted time to copy the block which fetched them no marks. However, listing of tools required to prepare the wooden block and the types of finishes to apply to the wooden block were well stated by most candidates. The expected drawing is shown as follows:



The full view of the block in the direction of arrow X

- (b) Most candidates could not sketch the spade very well. A few also could not differentiate between a spade and a shovel. A few also could not label the parts on the sketch but wrote the names of the parts under the sketch. The sketch of the spade is shown as follows:



A Freehand Pictorial Sketch of a Spade

- (iii) Most candidates were able to correctly state the use of the spade.

Question 4

(a) Copy and complete the table below with following tools where appropriate:

Spirit level, straight edge, tape measure, trowel, float, gauge rod, builder's square and mortar board.

Note: A tool may be selected more than once.

Operation	Two Tools Required
(i) Set out a wall	
(ii) Pick and spread mortar	
(iii) Lay end blocks	
(iv) Gauge the blocks	
(v) Level the blocks	

(b) (i) Make a freehand pictorial sketch of a bolster.

(ii) State one use of the bolster.

(c) Sketch the representative symbols of the following components:

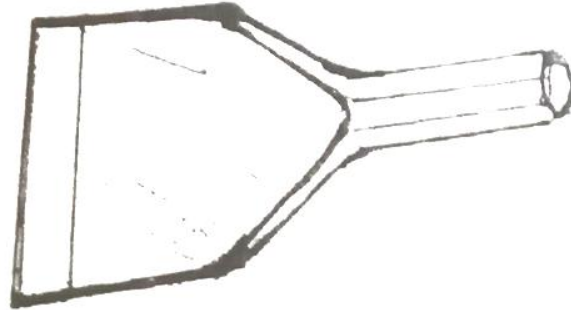
(i) Battery

(ii) Bulb

(a) This question was a very popular question among candidates. A few candidates however did not copy the table as requested by the question and thus lost the mark allocated to the copying of the table. A few also supplied only one tool instead of the two demanded by the question. The required answer is shown as follows:

S/N	Operation	Two Tools Required
I	Set out a wall	Straight edge, tape measure, builders square
II	Pick and spread mortar	Trowel, float, mortar board
III	Lay end blocks	Towel, builders square, straight-edge, spirit level, gauge rod.
IV	Gauge the blocks	Gauge rod, tape measure, builder's square.
V	Level the blocks	Spirit level, straight edge.

- (b) Many candidates were not able to make a freehand sketch of the bolster well. The sketch of the bolster is as follows:



A Freehand Sketch of a Bolster

- (ii) Most candidates could not state the use of the bolster. The bolster is used in conjunction with the club hammer to cut bricks /blocks/new openings in an existing walls.
- (c) Most candidates were not able to sketch the representative symbols for the various components very well. A few also mixed up the symbols for a cell and a battery. The symbols for the listed components are shown as follows:



Battery

OR



OR



Electric Bulb