

# **BDT (PRE-TECHNICAL SKILLS)**

## 1. **GENERAL COMMENTS**

The standard of the paper had been maintained. Candidates' performance could be compared with those of the previous years.  
Candidates generally performed well.

## 2. **A SUMMARY OF CANDIDATES' STRENGTHS**

- (1) Candidates presented neat graphic work.
- (2) Candidates had improved in freehand sketching of tools and equipment.
- (3) Most candidates attempted the three questions as demanded by the rubrics.
- (4) Incorrect spelling of Technical terms was reduced to the barest minimum.
- (5) Majority of the candidates exhibited good draughtsmanship skills.

## 3. **A SUMMARY OF CANDIDATES' WEAKNESSES**

- (1) Candidates exhibited poor arrangement of solutions to the questions.
- (2) Majority of the candidates could not differentiate isometric drawing from orthographic projection.
- (3) Most candidates could not give reasons for observing safety precautions.
- (4) Some candidates failed to state clearly the reason for carrying-out cross filing operation.
- (5) The use of the drawing instruments was a major problem to most of the candidates.

## 4. **SUGGESTED REMEDIES**

- (1) Teachers should guide students on how to label an object.
- (2) Teachers should emphasise on the correct uses of the drawing instruments.
- (3) Candidates should practice a lot more on freehand sketches.
- (4) A lot of demonstration exercises should be given to candidates in the absence of a workshop in the schools for practical work.
- (5) Teachers must stress on the use of appropriate pencils and instruments to improve on candidates' draughtsmanship skills.
- (6) Teachers should teach candidates on how to number questions to their specific responses/answers.
- (7) Candidates should read and understand questions thoroughly before answering them to avoid deviations.

5. **DETAILED COMMENTS**

**Question 1**

**COMPULSORY**

- (a) **State the main method for cooking the following foods:**  
(i) **rice;**  
(ii) **cake.**
- (b) **State four suitable methods for preserving fish.**
- (c) (i) **List the type of pencil most suitable for the following operation:**

<b>OPERATION</b>	<b>PENCIL USED</b>
<b>Lettering</b>	
<b>Drawing outlines</b>	
<b>Shading</b>	

- (iii) **List four methods of recording data for solving design problems.**
- (d) (i) **State three benefits of packaging.**  
(ii) **List two important information on a good package.**
- (e) **Draw a line to illustrate each of the following:**  
(i) **movement;**  
(ii) **texture.**

(a)&(b) Most candidates answered correctly the question 1(a) and (b) that required the main method of cooking rice and cake and suitable methods of preserving fish.

(c) (i) However, most candidates found it a problem to identify the type of pencil to be used for lettering drawing outlines and shading operations.

(iii) Most candidates also did not understand the four methods used to record data for solving design problems. Most candidates answered this question by listing investigations, design brief, visits, questionnaires, etc, as their answers which clearly shown that candidates did not understand the question.

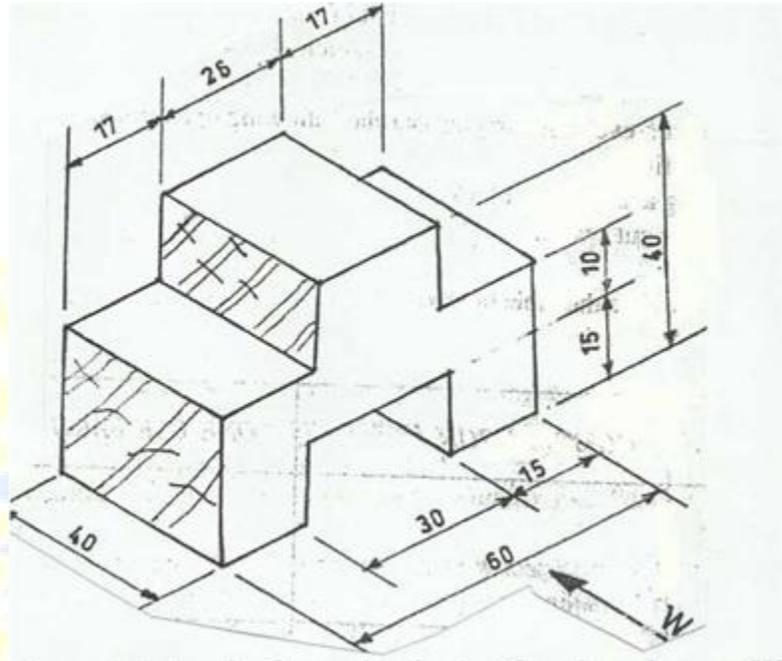
(d) (i)&(ii) Most candidates also did not understand the difference between benefits of good packaging and important information found on a good package. Some candidates got confused and used the answer for benefits of packaging as answers for important information found on a good package.

(e) (i) Majority of candidates failed to draw a line to illustrate movement.

- (ii) Most candidates could not draw a line to illustrate texture.

## QUESTION 2

Figure 1 shows a wooden object to be prepared in the workshop



- (a) Draw full size the front view in the direction of arrow W.
- (b) List two tools used for:
- Marking-out the shape of the object;
  - Cutting the waste wood.
- (c) State two ways of caring for and maintaining the jack plane.
- (d) State the difference between ferrous metals and non-ferrous metals.
- (e) Make a freehand sketch of the builder's square.
- (a) Most candidates attempted this question and were able to draw full size the front view in the direction of arrow W.  
Few candidates reproduced the whole block in isometric; because they did not know the difference between pictorial drawing and orthographic projections.
- (b) (i) Majority of the candidates could not identify tools for specific jobs they are meant to be used for.
- (ii) Most candidates had difficulty to differentiate woodwork tools from Metalwork or blockwork tools.  
Few candidates listed hacksaw as tool for cutting the waste wood.

- (c) Most candidates were not able to state two ways of caring for maintaining the jack plane. For example, washing the jack plane. Instead by cleaning the tool after use, oiling the metal parts, etc.
- (d) Few candidates were not able to state the difference between ferrous metals and non-ferrous metals.
- (e) Most candidates used instruments for sketching and builder's square. Some candidates drew a try square instead of builder's square.

### **QUESTION 3**

- (a) **State one reason why personal safety should be observed in the workshop.**
- (b) **List two specific tools for carrying out each of the following operations:**
  - (i) **setting-out a wall;**
  - (ii) **moulding bricks;**
  - (iii) **cutting a tenon from a piece of wood;**
  - (iv) **soldering sheet metals.**
- (c) (i) **Make a freehand pictorial sketch of a rasp file.**  
(ii) **Label any two parts of the tool sketched in (c)(i) above.**  
(iii) **State one use of the rasp file.**
- (d) (i) **State the main difference between a brick and a block.**  
(ii) **List the two main materials for making sandcrete blocks.**

- (a) Most candidates understood the reason why personal safety should be observed in the workshop.
- (b) Majority of candidates were able to list two specific tools for carrying out each of the following operations: (i) to (iv) correctly.
- (c) (i) Most candidates used instruments to sketch the rasp file. Few candidates drew a chisel in place of the rasp file.  
(ii) Most candidates did not understand the term 'label' any two parts of the tool sketched in (i) above.  
(iii) Majority of candidates were not able to state one use of the rasp file.
- (d) (i) Most candidates did not know the difference between a brick and a block.  
(ii) Few candidates could not list the two main materials for making sandcrete blocks.

### **QUESTION 4**

- (a) **List one protective clothing each for the following:**  
 (i) **foot;**  
 (ii) **head;**  
 (iii) **eyes.**
- (b) (i) **Make a freehand pictorial sketch of the firmer chisel.**  
 (ii) **Label any two parts of the tool sketch in 4(b)(i).**
- (c) **State one reason each for carrying out the following operations:**  
 (i) **cross-filing;**  
 (ii) **cutting a sandcrete block;**  
 (iii) **setting out wall.**
- (d) **Copy and complete the table below:**

<b>ALLOY</b>	<b>COMPOSITION</b>	<b>ONE USE EACH</b>
<b>Soft Solder</b>		
<b>Brass</b>		
<b>Bronze</b>		

- (a) Majority of the candidates were able to identify and list one protective clothing for (a)(i) foot, (ii) head and (iii) eyes correctly.
- (b) (i) Most candidates drew a cold chisel instead of a firmer chisel.  
 (ii) Most candidates labelled the parts of the tool sketched separately from the sketch which is not what the question demanded.
- (c) In question 4(c) (i),(ii) and (iii), candidates were asked to state a reason for cross filing, curing a sandcrete block and setting out a wall. Most candidates did not understand the question.
- (d) Also in question 4(d) where candidates were asked to write the composition and one use each of alloy. Most candidates misplaced the composition, e.g. soft solder which have its composition as lead + tin or Antimony had some candidates replacing it with copper + tin.