

Centre Number	Candidate Number

Candidate Name _____

EXAMINATIONS COUNCIL OF ZAMBIA

Examination for General Certificate of Education Ordinary Level

Woodwork

6030/1

Paper 1 Theory, Drawing and Design

Tuesday

19 JULY 2016

Additional materials:
 A2 Drawing paper (1 sheet)
 Answer Booklet
 Metric scale rule, scale of 1:5
 Standard drawing equipment

Time: 2 hours 45 minutes

Marks: 100

Instructions to Candidates

Write your name, Centre number and candidate number in the spaces at the top of this page and on all Answer Booklets used.

Section I Part A

Answer **all** parts of question 1.

Write your answers on the spaces provided in the question paper.

Section I Part B

Answer **any two** questions.

Write your answers on the separate Answer Booklet provided.

Section II Drawing and Design

Answer **all** questions.

Use the **A2** drawing paper prepared prior to the examination for your answers.

Use a scale of 1:5 for all your drawings.

At the end of the examination, fasten the separate Answer Booklet and A2 Drawing paper to the question paper.

Information for Candidates

The number of marks is given in brackets [] at the end of each question or part question.

All dimensions are in millimetres.

Cell phones are not allowed in the examination room.

FOR EXAMINER'S USE	
Section I PART A	
Section I PART B	2
	3
	4
	5
Section II	
TOTAL	

Section I (Theory) Part A

Answer **all** questions from this part in the spaces provided on the question paper.

Part A carries 26 marks

You are advised to spend not more than **35 minutes** on this section.

1 (a) **Table 1** shows the operation and/or tools used according to their classification.

Fill in the missing spaces.

Operation	Tool
Measuring	(i) _____ (ii) _____
(iii) _____	Pencil, marking gauge, divider
(iv) _____	Try square, winding strip, sliding bevel.
Driving	(v) _____ (vi) _____ (vii) _____
(viii) _____	Vice, Sash cramp, G-cramp
(ix) _____	Chisel, Saw

[9]

Table 1

(b) A wet piece of timber weighs 12kg and its dry weight is 8kg.

(i) Write down the formula for calculating the moisture content.

Moisture content _____

(ii) Calculate the moisture content.

[2]

(c) **Figure 1** shows one of the equipment commonly used in the woodwork shop.

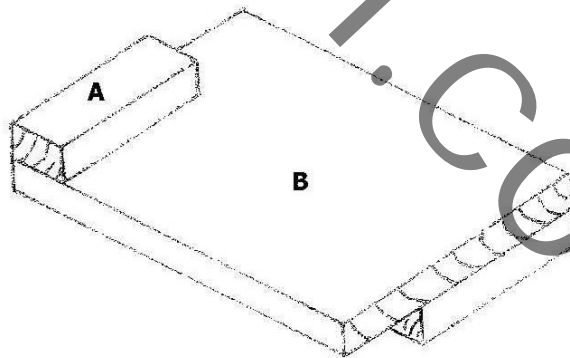


Figure 1

(i) Name the equipment _____

(ii) Name the suitable type of wood it is made from _____

(iii) State how Part A is joined to Part B.

_____ [3]

(d) Plane chocking occurs when planing a piece of wood.

(i) Explain what is meant by the term "chocking". _____

(ii) Write down two causes of plane chocking.

(1) _____

(2) _____ [3]

(e) **Figure 2** shows the drawing of a hinge.

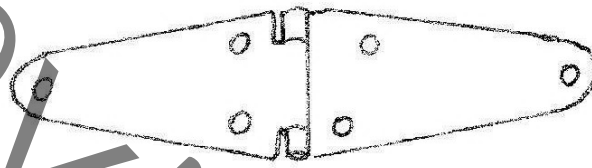


Figure 2

Name the hinge _____ [1]

(f) (i) Name the joints shown in **Figure 3**.

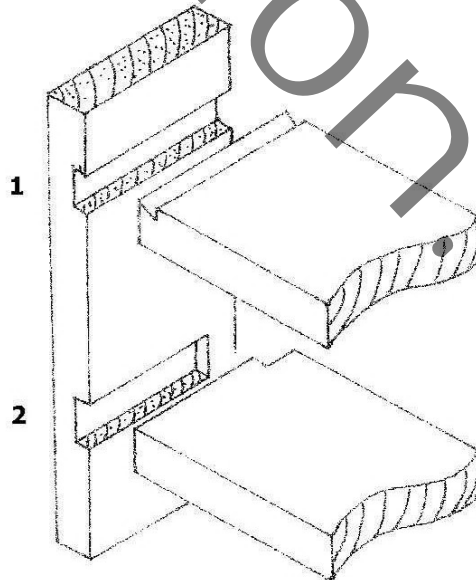


Figure 3

Joint

1 _____

2 _____

(ii) Give an example where each can be used.

Joint

1 _____

2 _____

[4]

(g) (i) Name the cramp used when gluing a wide board.

(ii) State one precaution to be observed when using this cramp and why?

Precaution: _____

Reason: _____

(iii) State the reason for using a third cramp across on the opposite side to the other two when cramping wide boards.

[4]

Section I (Theory) Part B

Answer any **two (2)** questions from this part. Write your answers in the Answer Booklet.

Part B carries 24 marks. Each question in this part carries 12 marks.

You are advised to spend no longer than 35 minutes on this part.

- 2** Timber is normally treated with some preservatives before being used.
- (i) What are preservatives? [2]
 - (ii) State one reason why they are used. [2]
 - (iii) Mention any two preservatives. [2]
 - (iv) List down the stages to be followed when applying preservatives. [6]
- 3** Timber goes through several processes from the time the tree is planted to the time it is to be used as a board.
- (i) What is meant by deforestation? [1]
 - (ii) (a) Timber is said to be classified into two. Name these classifications. [2]
 - (b) Mention one characteristic of each classification. [1]
 - (iii) Name the process of chopping down the tree. [1]
 - (iv) (a) State the term used to refer to the process of cutting boards from the log. [1]
 - (b) Name two methods of this process. [2]
 - (v) State the process of drying timber. [2]
 - (vi) Mention two methods of drying timber. [2]
- 4**
- (i) Sketch a bow saw and label any five parts. [7]
 - (ii) Mention one use of this saw. [1]
 - (iii) State the part of the bow saw that makes the blade in tension. [1]
 - (iv) The bow saw is dry assembled.
 - (a) Explain the meaning of dry assembly. [1]
 - (b) State the purpose of dry assembly. [1]
 - (v) Mention the stroke (direction) in which the bow saw cuts. [1]
- 5**
- (i) Sketch a marking gauge and label four parts. [6]
 - (ii) State the main difference in construction between the marking gauge and the cutting gauge. [2]
 - (iii) Write one use of each of the tools mentioned in (ii) above. [2]
 - (iv) Name the material from which the two gauges are usually made from. [1]
 - (v) Mention the material from which the thumbscrews are made from. [1]

Section II Drawing and Design.

Answer all questions from this section on the already prepared drawing paper.

Section II carries 50 marks.

You will be required to draw part of this section using a scale of 1:5.

You are advised to spend 1 hour 35 minutes on this section.

On your drawing paper, use the space to the right of the vertical line to answer Part C (Design) and the space to the left to answer Part D. (Drawing)

Figure 4 shows a free standing unit for storing ornamental items in the living room. The carcass including the door is made of 20mm manufactured board. The back is a plywood. Two pieces of solid wood of 60mm × 30mm are fixed at the bottom to provide the unit with stability.

Part C

Sketch freehand and approximately half full size:

- (i) an exploded view of the joint you would use at the corner of piece A and B. [5]
- (ii) the method of fixing the unit to the wall if you were to change from a free standing unit to a wall mounted unit. [4]

Part D

(a) Draw in either first or third angle projection using scale of 1:5.

- (i) a front view in the direction of arrow F. [15]
- (ii) A sectional end view on the line X-X. [12]
- (iii) a plan view. [2]

[Hidden detail is not required]

(b) Add six main dimensions to your drawing. [3]

(c) In the title box, drawn at the bottom right hand corner of your drawing, print the following details in suitable lettering.

- (i) Your name
- (ii) Your Examination Number
- (iii) A title
- (iv) The projection you have used
- (v) The scale used [5]

Marks for quality [2]

Marks for layout [2]

FREE STANDING UNIT

For
Examiner's
Use

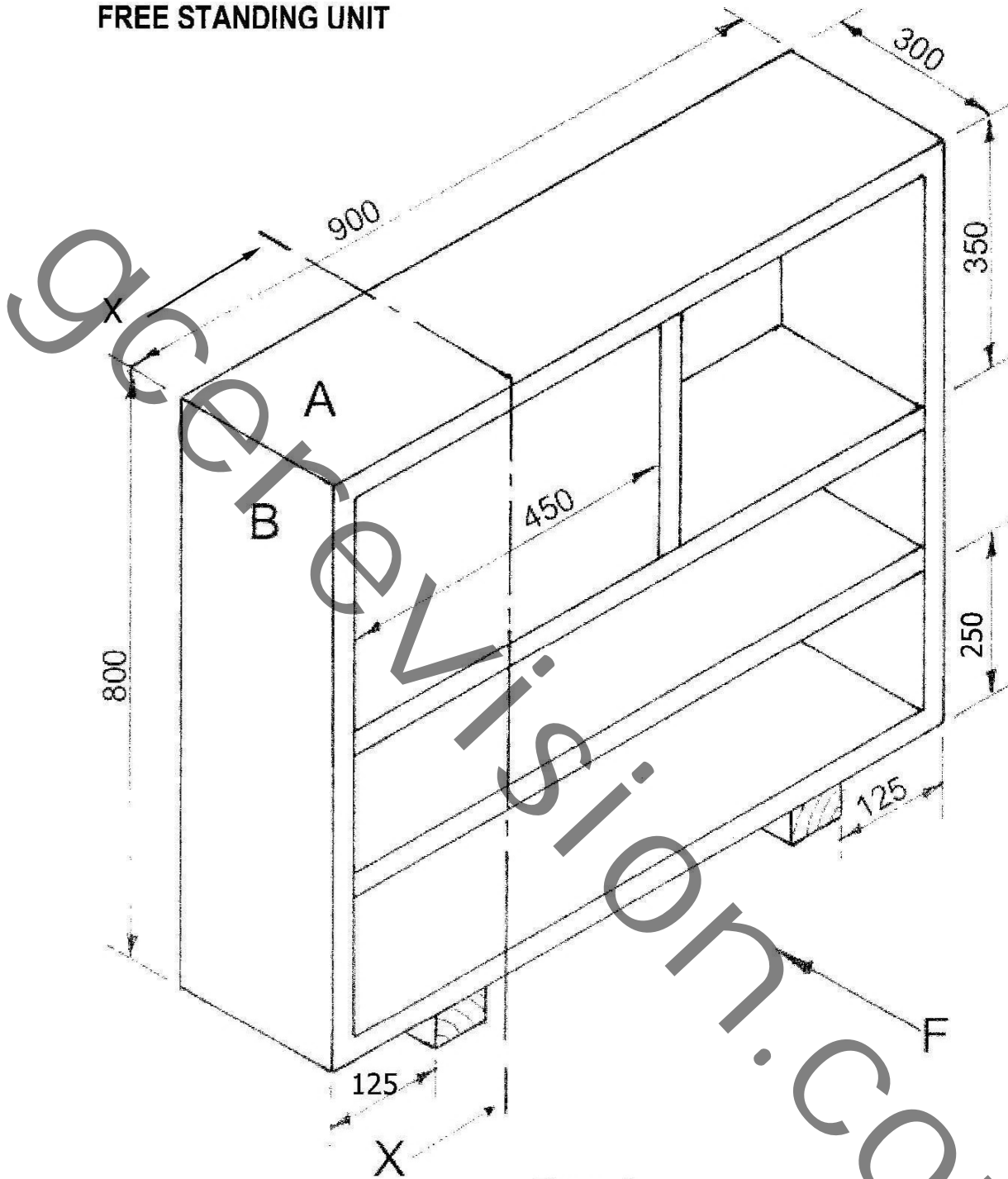


Figure 4