

Candidate Name _____

Centre Number			Candidate Number						

EXAMINATIONS COUNCIL OF ZAMBIA

Examination for School Certificate Ordinary Level

Woodwork

6030/1

Paper 1 Theory, Drawing and Design

Tuesday

7 NOVEMBER 2017

Additional Material:

A2 Drawing paper (1 sheet), Answer Booklet and 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.

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) **Figure 1** show a woodwork joint

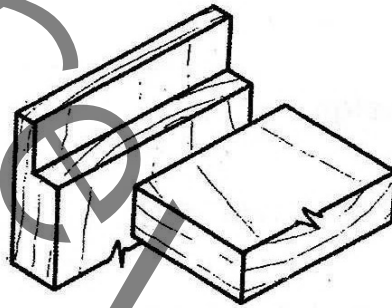
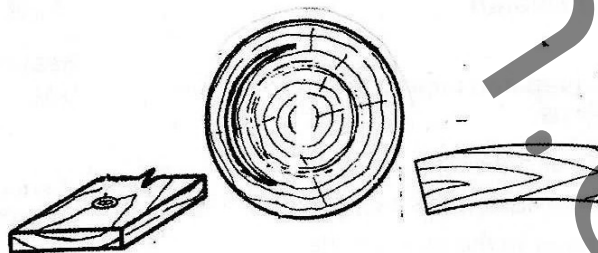


Figure 1

- (i) Name the joint.
.....
- (ii) Give one use of this joint.
.....
- (iii) State **one (1)** reason why this joint has less strength.
..... [3]

(b) **Figure 2** shows the common defects in timber.
Name the defects



- (i)
- (ii)
- (iii)

Figure 2

- (i)
- (ii)
- (iii) [3]

(c) **Figure 3** shows the crossed-section of wood working chisels.
Name the chisels and their use.

(i)



(ii)



(iii)

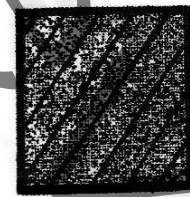


Figure 3

(i) Name

Use

(ii) Name

Use

(iii) Name

Use [6]

(d) **Table 1** shows a list of hand tools used in wood.
State their use.

Tool	Use
(i) Bull nose plane	
(ii) Warrington hammer	
(iii) Bradawl	
(iv) Mitre clamp	

Table 1

- (e) (i) Name the process of removing excess moisture from timber.
.....
- (ii) List **four (4)** reasons for conducting the process named in (e) (i) above.
- 1
2
3
4 [5]

- (f) Name the gouges that can be used to cut the following various shapes.
- (i) Circular grooves and fluted decorations.
.....
- (ii) Long circular grooves.
.....
- (iii) Hollows and circular depressions.
..... [3]

- (g) State **two (2)** safety precautions you would observe to prevent the work piece from being damaged when using a mortice chisel to make mortices.
- (i)
(ii) [2]

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 **Figure 4** shows a piece of wood measuring 220mm × 60mm × 20mm.

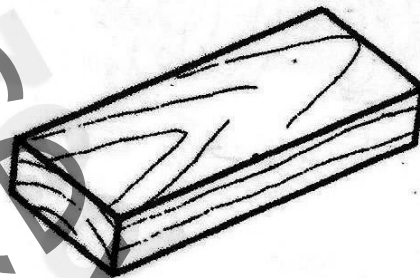


Figure 4

Step by step, state how you would plane this piece of wood to size 200mm × 60mm × 20mm.

[12]

- 3 (a) (i) Draw a counter sunk screw and label 3 parts. [5]
 (ii) Why is it not advisable to use a hammer to drive in screw? [1]
 (iii) Name any **two (2)** materials screws can be made of. [2]
- (b) (i) Draw a Sash Cramp. [2]
 (ii) State its use. [1]
 (iii) Label **one (1)** part [1]
- 4 Nails in woodwork are used for fixing or joining wood.
- (i) Using sketches, name and show the two different methods of nailing. [6]
 (ii) Explain the advantages that each method of nailing has. [2]
 (iii) To protect against weather and prevent leaking from a roofing nail, write **two (2)** features that are incorporated in the manufacture of these nails. [2]
 (iv) By use of a sketch, show how one would prevent the work from being damaged when extracting the nail from wood. [2]

5 (a) Figure 5 shows the drawing of an equipment used in the woodwork shop.

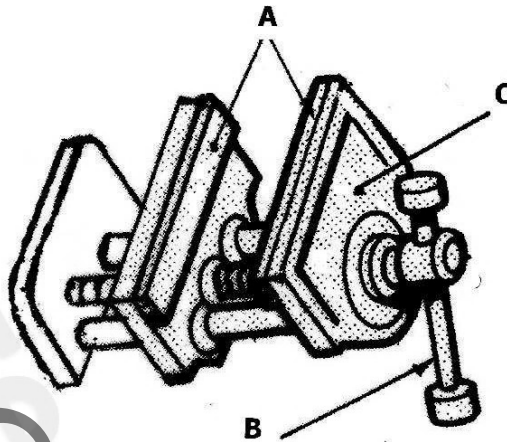
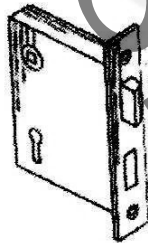


Figure 5

- (i) Name the equipment. [1]
 - (ii) State its use. [1]
 - (iii) Name the labelled parts. [3]
 - (iv) State the use of part A. [1]
- (b) Figure 6 shows three drawings of fasteners.



(a)



(b)



(c)

Figure 6

- (i) Name the fasteners. [3]
- (ii) Give an example of where each can be used. [3]

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.

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)** of this section.

Figure 7 shows details of a **Bedside Cabinet** made from solid timber which is 30mm thick. The cabinet is supported by a frame 150mm high. The plywood is 15mm thick is rebated at the back of the cabinet.

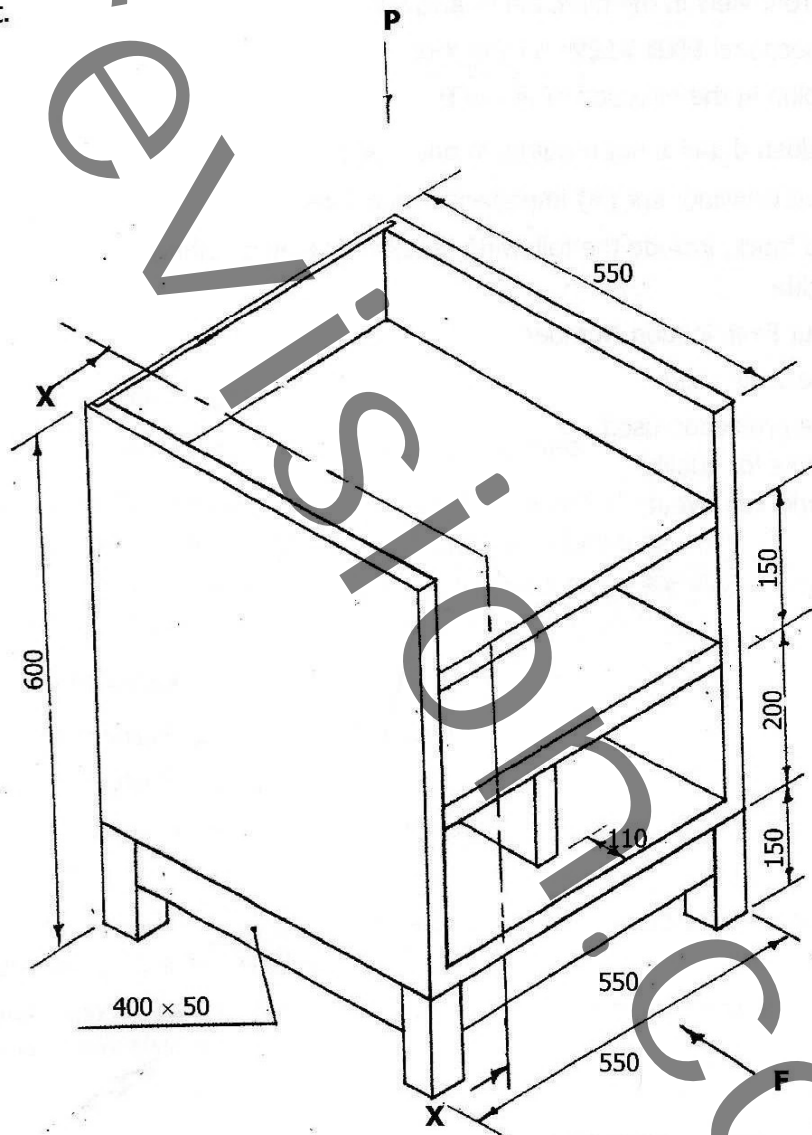


Figure 7

Part C

Sketch freehand and approximately half full size:

- (i) the method you would use to fix the cabinet to the under frame. [4]
- (ii) an exploded view of the joint you would use to secure the partition to the bottom shelf. [4]

Part D

Do not show your solutions to Part **C** above in your answers to Part **D**.

- (a) Draw in either **FIRST** or **THIRD** angle projection using a scale of **1:5**.
 - (i) a front view in the direction of arrow **F**. [12]
 - (ii) a sectional **END VIEW** on line **X-X**. [14]
 - (iii) a plan in the direction of arrow **P**. [4]

[Hidden detail is not required in any view]
- (b) Add to your drawing **six (6)** important dimensions. [3]
- (c) In the title block, include the following details in suitable writing.
 - (i) A title
 - (ii) Your Examination Number
 - (iii) The scale used
 - (iv) The projection used [5]

Marks for quality [2]

Marks for layout [2]