Candidate Name_____

Centre Number	Candidate Number

EXAMINATIONS COUNCIL OF ZAMBIA

Joint Examination for the School Certificate and General Certificate of Education Ordinary Level

WOODWORK 6030/1

PAPER 1 Theory, Drawing and Design

Tuesday 14 OCTOBER 2014

Additional materials:
- A2 Drawing paper (1 sheet)
- Answer Booklet
- Metric Scale rule, scale of 1:6
- 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 separate answer paper 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

Answer **all** parts of this section.

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** parts of question 1 from this section.
Part A carries 26 marks.

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

1 (a) State two reasons why first aid is important in the workshop.

(i) Reason 1: _____

(ii) Reason 2: _____ [2]

(b) **Figure 1** shows a light picture frame made of solid timber.

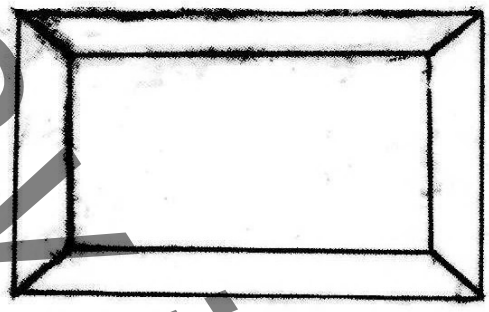

Figure 1

(i) Name the appropriate joint you would use on the corner

Joint: _____

(ii) Name the tool you would use to mark the joint.

_____ [2]

(c) Every piece of timber should have its moisture content reduced before it can be used.

(i) State three main reasons of reducing moisture content.

Reason 1: _____

Reason 2: _____

Reason 3: _____

(ii) Name the standard measure of moisture content

_____ [4]

For Examiners Use

(d) **Figure 2** shows different types of special planes.

Name the planes and state the use of each.

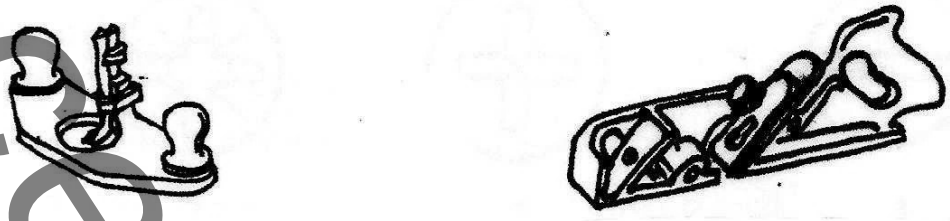

Figure 2

Name: _____ Name: _____

Use: _____ Use: _____ [4]

(e) **Figure 3** shows a model template made from 400mm square solid timber of 20mm thick. Identify two tools you would use to cut and to smoothen the parts labelled **1** and **2**.

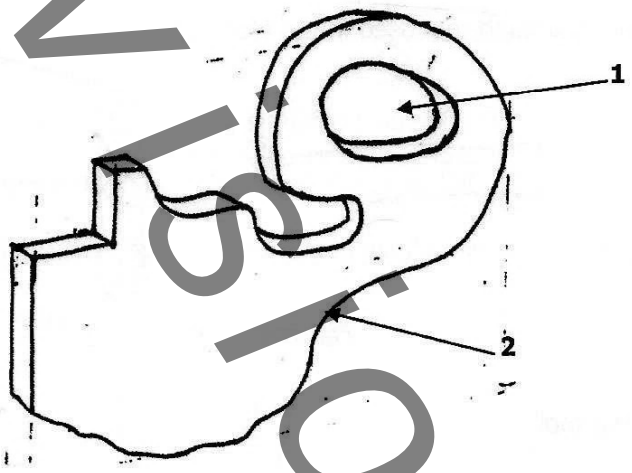

Figure 3

	Tool used to cut	Tool used to smoothen
Part 1		
Part 2		

[4]

(f) State two reasons why screws should never be hammered.

(i) _____

(g) Figure 4 shows the plans of screw heads.

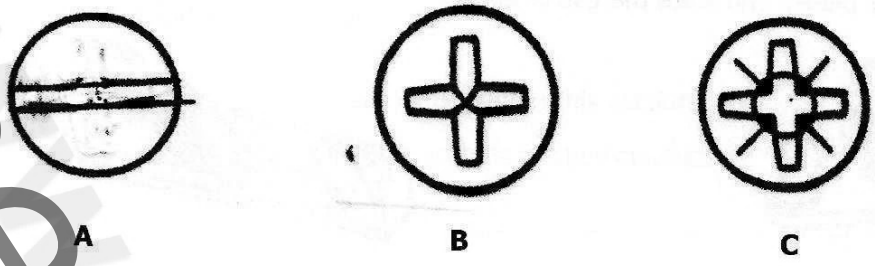

Figure 4

Mention the appropriate screw driver that can be used on the screw heads shown.

(i) Screw head **A** _____

(ii) Screw head **B** _____

(iii) Screw head **C** _____ [3]

(h) Figure 5 shows a hand tool used in the workshop.

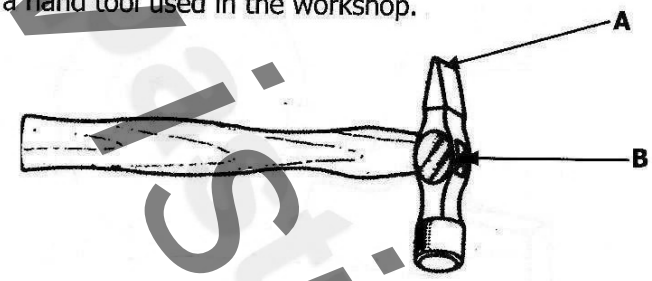

Figure 5

(i) Name the tool

_____

(ii) State the use of part **A** on the tool

_____

(iii) State the purpose of part **B**

_____ [3]

(i) When ordering glass paper and nails, it is important to give specifications. State one specification when ordering glass paper and nails.

(i) Nails _____

(ii) Glass paper _____ [2

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Section I (Theory) Part B

Answer any **two (2)** questions from this part in the Answer Booklet provided.

Part B carries 24 marks

Each question in this part carries 12 marks.

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

2 **Figure 6** shows a marking out tool placed on top of a piece of wood.

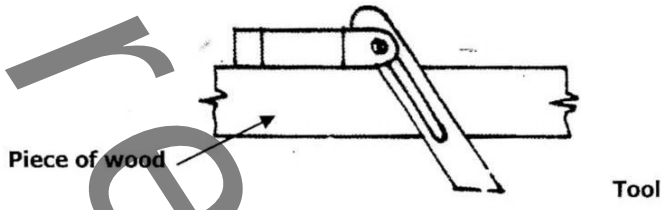


Figure 6

(a) Name the tool. [1]

(b) With the help of sketches

(i) Show how you would mark a dovetail given slope of 1:7. [6]

(ii) Explain why a steep slope would not make a good joint. [2]

(iii) Name and sketch the appropriate chisel you would use to clean the joint. [3]

3 **Figure 7** shows part of a ratchet with a bit inserted in it.

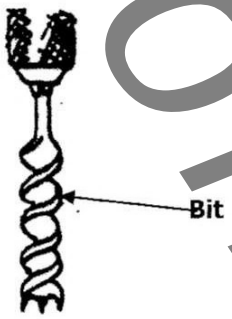


Figure 7

(a) Name the bit. [1]

(b) Name and explain **two** methods you would use to determine the accurate depth of a hole when drilling. [8]

(c) Sketch a complete ratchet brace without a bit in it. [3]

4 **(a)** Sketch exploded isometric views of the following joints.

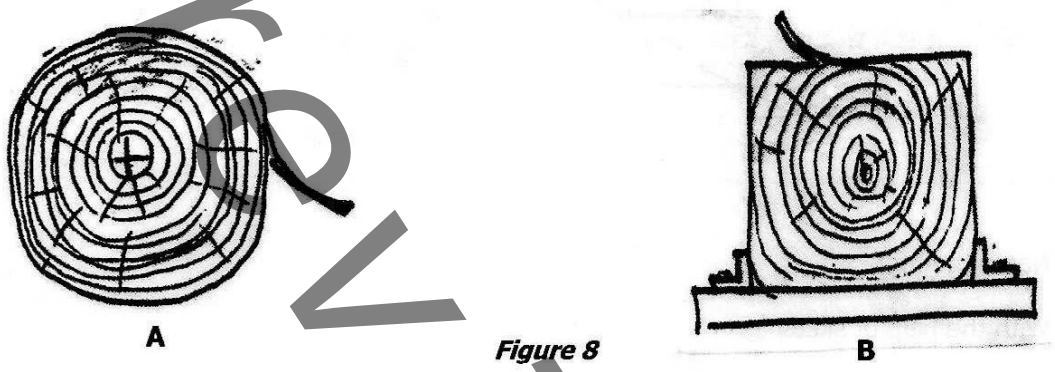
(i) Corner halving

(ii) Cross halving

(iii) Dovetail halving [9]

(b) For each joint, explain where it can be used. [3]

5 **Figure 8** shows two common methods of cutting veneers



A B

Figure 8

(a) Name each method. [2]

(b) Mention **two** important features of each method. Explain the differences between method **A** and method **B**. [4]

(c) State **one** advantage of each method over the other. [2]

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 to a **scale of 1:6**.
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 on the left to answer **Part D (Drawing)**.

Figure 9 shows a drawing of a small living room table. The frame of the table and the top are made of solid wood and the dimensions are given below. The top of the table is veneered and the edges are neatly lipped.

Top rails	**552mm × 48mm × 54mm**
Bottom pieces	**420mm × 60mm × 54mm**
Uprights	**552mm × 72mm × 54mm**
Cross rail	**804mm × 60mm × 30mm**
Top	**864mm × 552mm × 24mm**

Part C (Design)

Sketch freehand and approximately half-full size.

1 An exploded isometric view of the joint you would use to join:

(i) the bottom piece and the upright at **B**. [4]

(ii) the cross rail and the upright. [4]

2 Show how one end of the bottom piece can be shaped to improve its appearance. [2]

Part D (Drawing)

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

(a) Draw either in **First Angle** or **Third Angle Projection** using a metric scale of 1:6

(i) a Front View of the table as seen in the direction of the arrow F. [12]

(ii) a sectional End View of the part to the right of the section line X-X; [14]

(iii) A Plan projected from view (i) (arrow P) [2]

(Hidden details are not required in all the views).

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

(c) In the title block, include the following details in suitable writing:

(i) Title. [1]

(ii) Name. [1]

(iii) Examination number. [1]

(iv) The scale used. [1]

(v) The projection used. [1]

Marks for quality [2]

Marks for layout [2]

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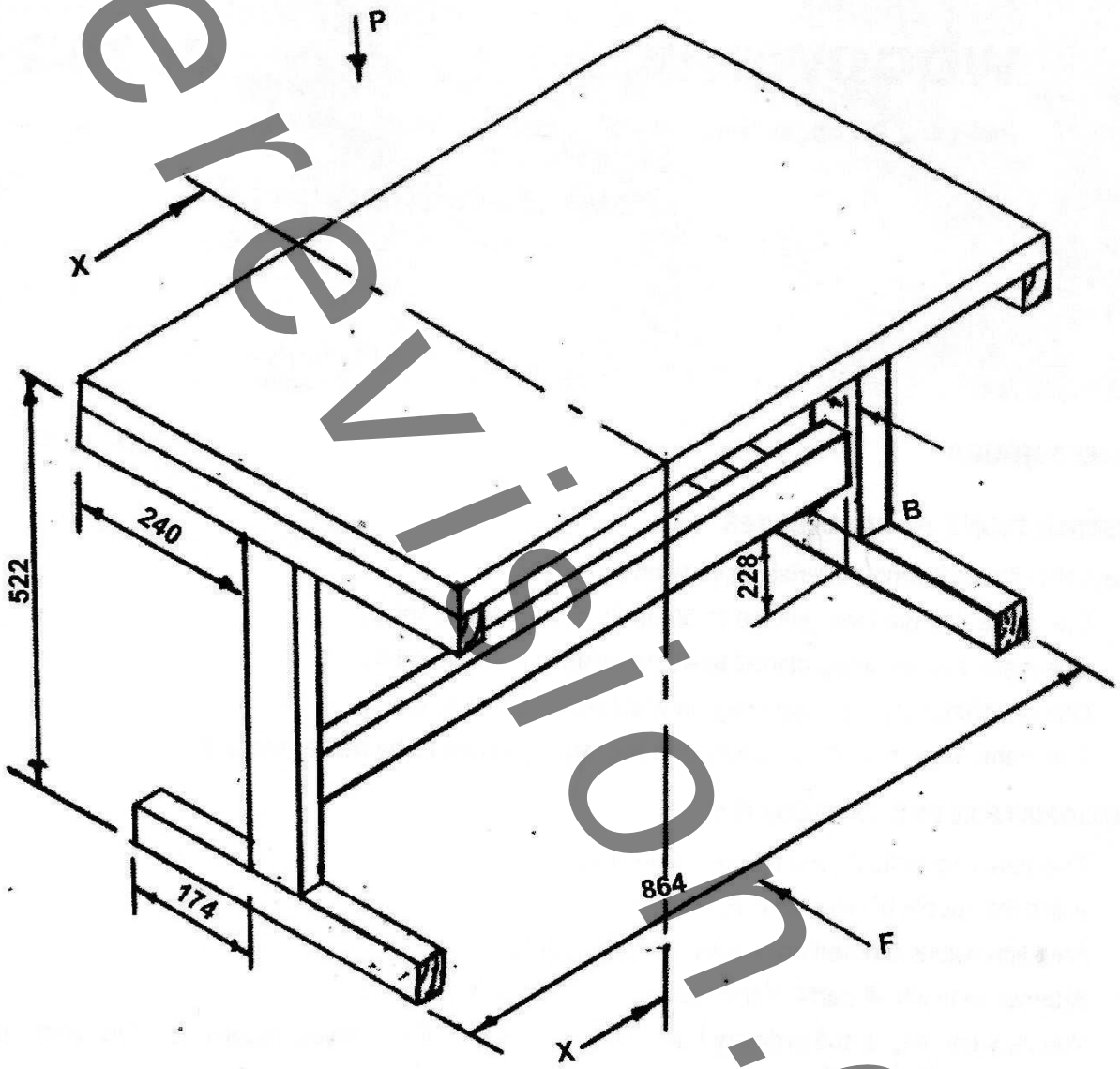

Living Room Table

Figure 9