Candidate Name	Centre Number	Candidate Number

ZIMBABWE SCHOOL EXAMINATIONS COUNCIL

General Certificate of Education Ordinary Level

WOOD TECHNOLOGY AND DESIGN 4059/1

Paper 1 Theory, Graphics and Design

SPECIMEN PAPER 3 hours

Additional materials:
Answer sheet,
Coloured crayons,
Drawing paper (**A2**),
Metric scale rule, scale of **1:1** or **1:5,**
Standard drawing equipment, Calculator.

TIME: 3 hours

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 A Theory
Answer **all** questions.
Write your answers in the spaces provided on the question paper.

Section B Theory
Answer any **three** questions.
Write your answers on the separate answer paper provided.

Section C Graphics and Design
Answer Question **16** on the **A2** drawing paper provided.
At the end of the examination, fasten the separate answer paper and drawing paper securely to the question paper.

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
SECTION C	
TOTAL	

INFORMATION FOR CANDIDATES
Marks are given in brackets [ ] at the end of **each** question or **part** question.

You are advised to spend no longer than **20 minutes** on **Section A**, **40 minutes** on **Section B** and **2 hours** on **Section C**.

This question paper consists of 10 printed pages and 2 blank pages.

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Section A (20 marks)

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Answer **all** questions in this section in the spaces provided.

You are advised to spend **not** more than **20 minutes** on this section.

1 **(a)** Accidents which occur when using machines and power tools are usually due to

_____ [1]

(b) Name one type of fire fighting equipment.

_____ [1]

2 **(a)** The crushing force on a piece of timber is called

_____ [1]

(b) The property which enables wood to retain shape after bending is called

_____ [1]

3 **Figure 1** shows a section of a tree trunk.

For Examiner's Use

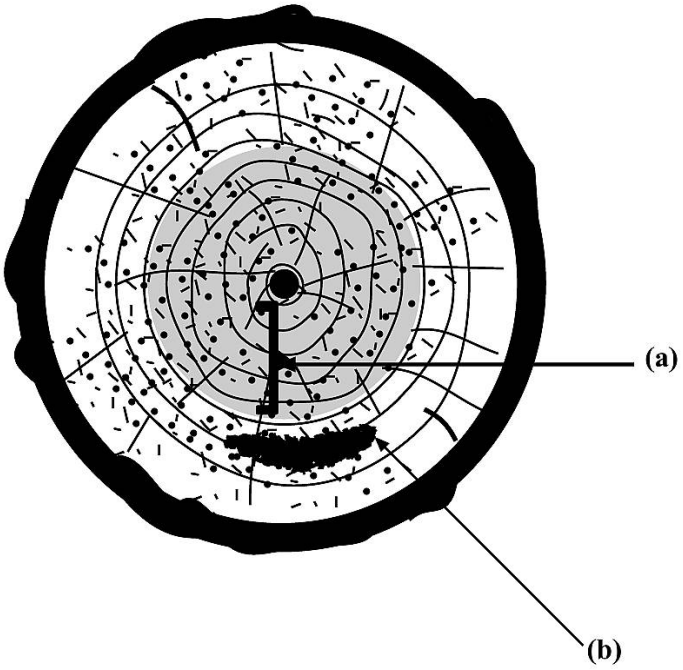


Fig 1

(a) Name part labelled **(a)**.

_____ [1]

(b) The type of defect labelled **(b)** is called

_____ [1]

4 **(a)** A tool used for setting a mortise gauge is …

_____ [1]

(b) Identify a tool with a swivel shoe.

_____ [1]

5 **(a)** Name a suitable joint for joining drawer sides and drawer front.

_____ [1]

(b) The purpose of a long shoulder on a long and short shouldered haunched mortice and tenon joint is

_____ [1]

For Examiner's Use

6 **(a)** What are the effects of burning fossil materials?

_____

_____ [1]

(b) Which of the materials used in Wood Technology can be renewable?

_____ [1]

7 **(a)** **Figure 2** shows a cut made by a crosscut saw.

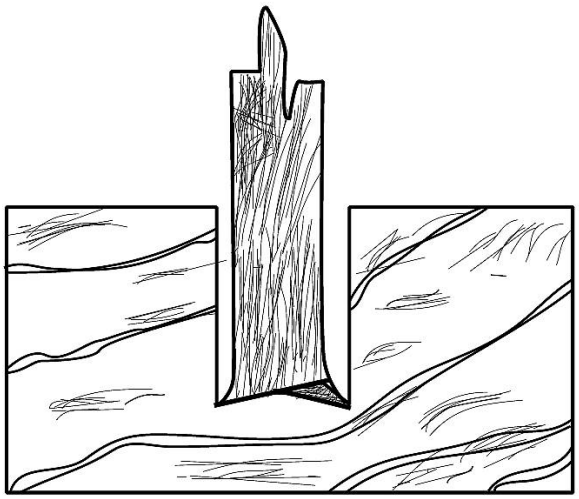


Fig 2

Why is the cut wider than the thickness of the blade?

_____ [1]

(b) The plane for cleaning the bottom of housing joints is called:

_____ [1]

For Examiner's Use

8 **(a)** Give **one** form of platform for upholstery.

_____ [1]

(b) A suitable adhesive to bond Rexine on some platforms when upholstering is

_____ [1]

9 **Figure 3** shows a fixture used in wood construction.



Fig 3

(a) Name the fixture.

_____ [1]

(b) Name a suitable hinge for fixing a ledged and braced door.

_____ [1]

10. Where are the following parts fixed in roof construction?

(a) Fascia board

_____ [1]

(b) Roofing sheets

_____ [1]

SECTION B (30 marks)

Answer **any three** questions from this section on the separate answer paper provided. You are advised to spent not more than **40 minutes**

11 Mrs Chari requires a unit to place different types of cutlery in the kitchen.

(a) Design a portable unit to store at least three different types of cutlery in three different compartments. [8]

(b) State two design factors to consider in relation to cutlery. [2]

12 **(a)** A door has several knots and cracks. Explain the process of painting the door. [8]

(b) State a method used to join the sheeting of ledged, braced and batterned doors. [1]

(c) Name a machine to be used for reducing timber to the required thickness when making doors. [1]

13 **(a)** A client requires a simple wooden jewellery box shown in **Figure 4**.

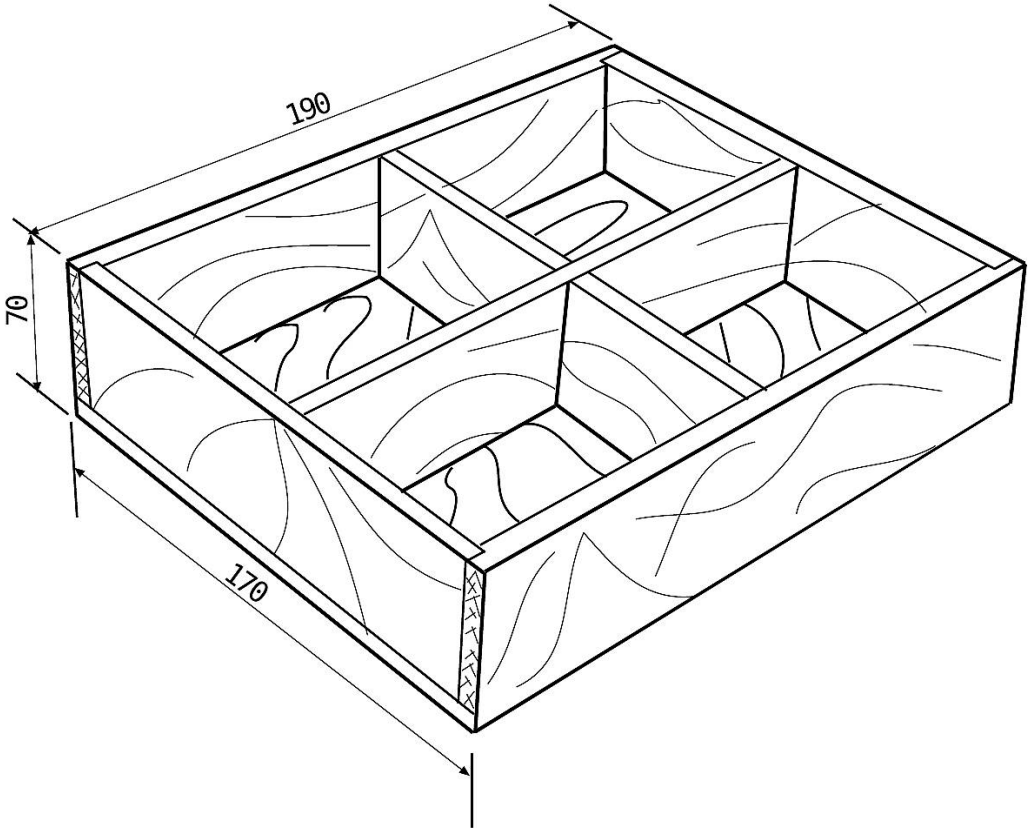


Figure 4

Complete the cutting list in **Table 1**.

ITEM	MEMBERS	QUANTITY	ROUGH SAWN		
			L	W	Th
1.	Long rails	2		75	
2.	Short rails	2	160		20
3.	Long dividing rail	1	190		15
4.	Short dividing rail	1	140	75	
5.	Bottom	1	200	150	4

[5]

(b) Given that the price of wood used for the jewellery box is $12.50 and labour is $7.00. Considering the addition of 10% overhead cost, calculate the cost of making the box. [5]

14 **(a)** What is a business proposal? [1]

(b) State three contents of a business project proposal. [3]

(c) Give **two** examples of the role of management in a company. [2]

(d) State **two** forms of leadership styles. [2]

(e) Name one government ministry that is responsible for each of the following:

(i) The eradication of poverty amongst youth through the funding of projects in their communities. [1]

(ii) Equal opportunities for men and women. [1]

15 **(a)** Explain the stages of manufacturing plywood [8]

(b) Sketch and name a method of covering ends of man-made boards in a piece of furniture. [2]

SECTION C – DESIGN

Compulsory question.

Use A2 size drawing paper for this question.

16 **Figure 5** shows a Vendor's table made of 20mm thick solid wood and legs of 40 mm × 40 mm thick. The bottom of tray is 9mm plywood rebated in.

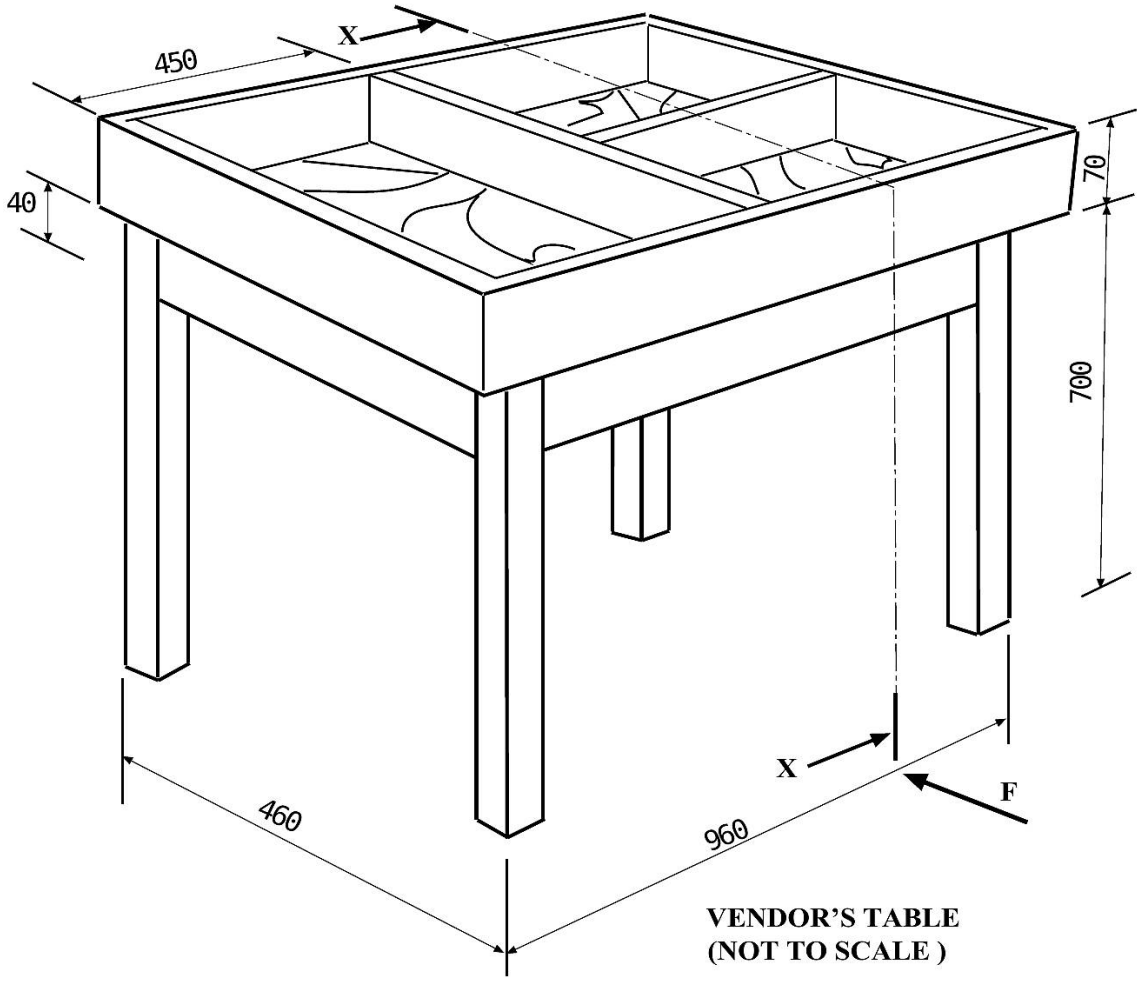


Fig 5

Part I (10 marks)

In this part sketches should be free hand. Answers must be in the space to the right of the vertical line on your prepared drawing paper.

(a) Name and sketch the joint at **A** pulled apart. [4]

(b) Sketch a method of attaching the box marked **P** to the under frame. [3]

(c) Show how the legs can be shaped to improve appearance. [2]

(d) Name a method of preventing legs from splitting when pushed or pulled. [1]

Part II (20 marks)

You need to work to a metric scale of 1:5 in this section. Draw either **first** or **third** angle projection.

(a) The Front Elevation in the direction of arrow **F**. [4]

(b) The Sectional End Elevation of part indicated by the section line **XX**. [10]

(c) Include the following in your drawing:

(i) Four important dimensions to your drawing. [2]

(ii) Your candidate number

(iii) Title of the drawing [1]

(iv) Marks will be allocated for:

Layout and [1]

Quality [1]

(v) Show the projection symbol used in the drawing [1]

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