

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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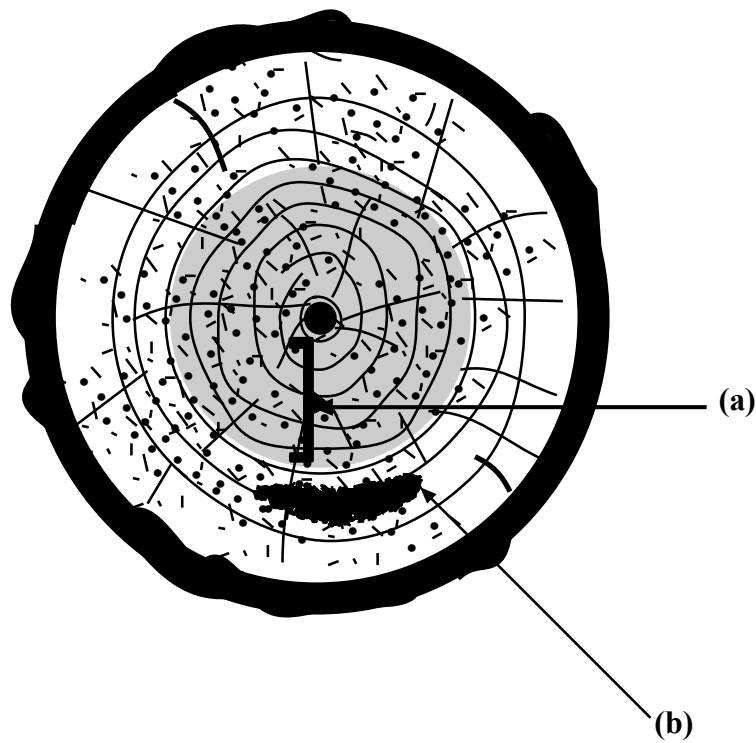
**Section A** (20 marks)**For  
Examiner's  
Use**

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.



**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]

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

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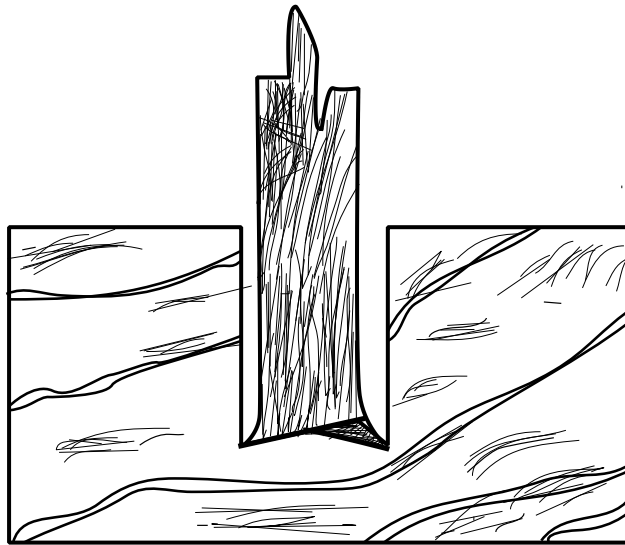
[1]

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

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[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?

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[1]

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

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[1]

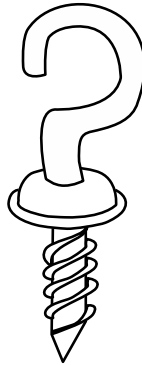
- 8 (a) Give **one** form of platform for upholstery.

\_\_\_\_\_ [1]

- (b) A suitable adhesive to bond Rexine on some platforms when upholstery 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

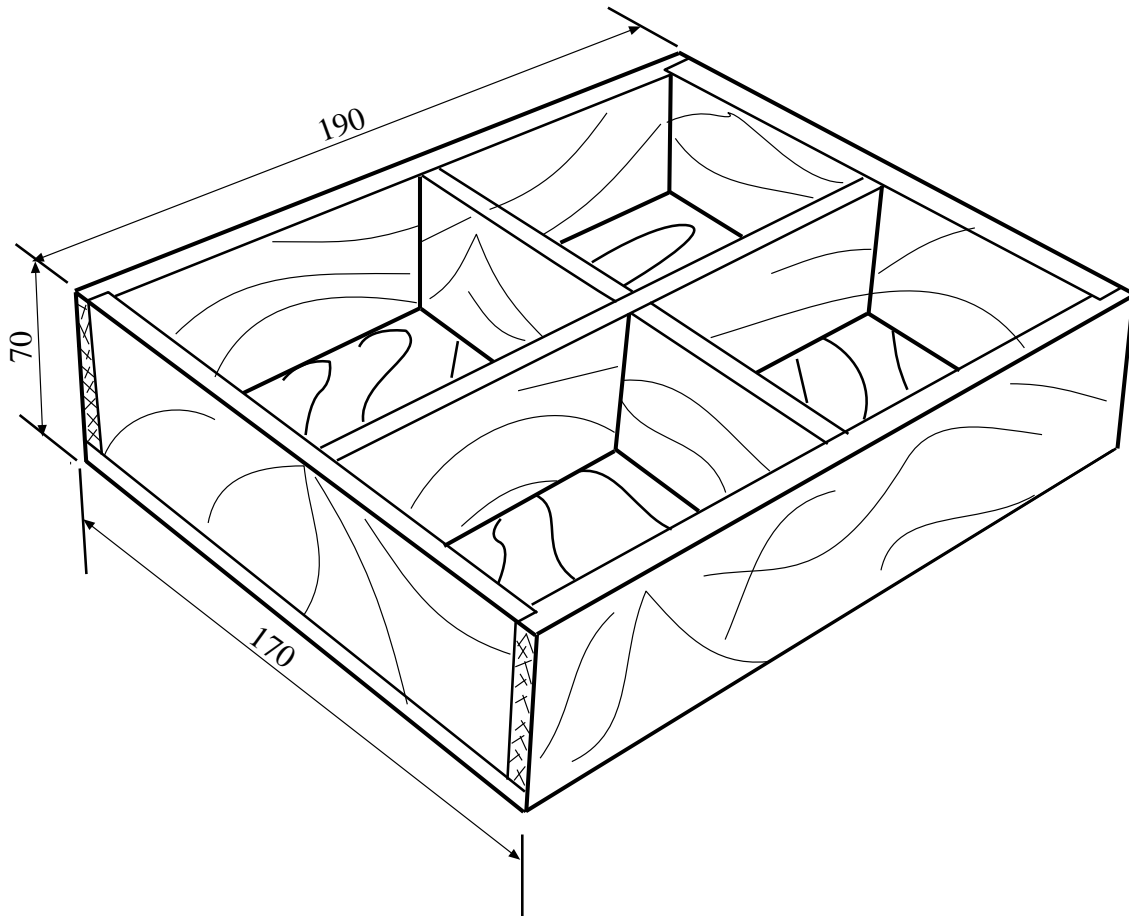
\_\_\_\_\_ [1]

**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 battened 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]

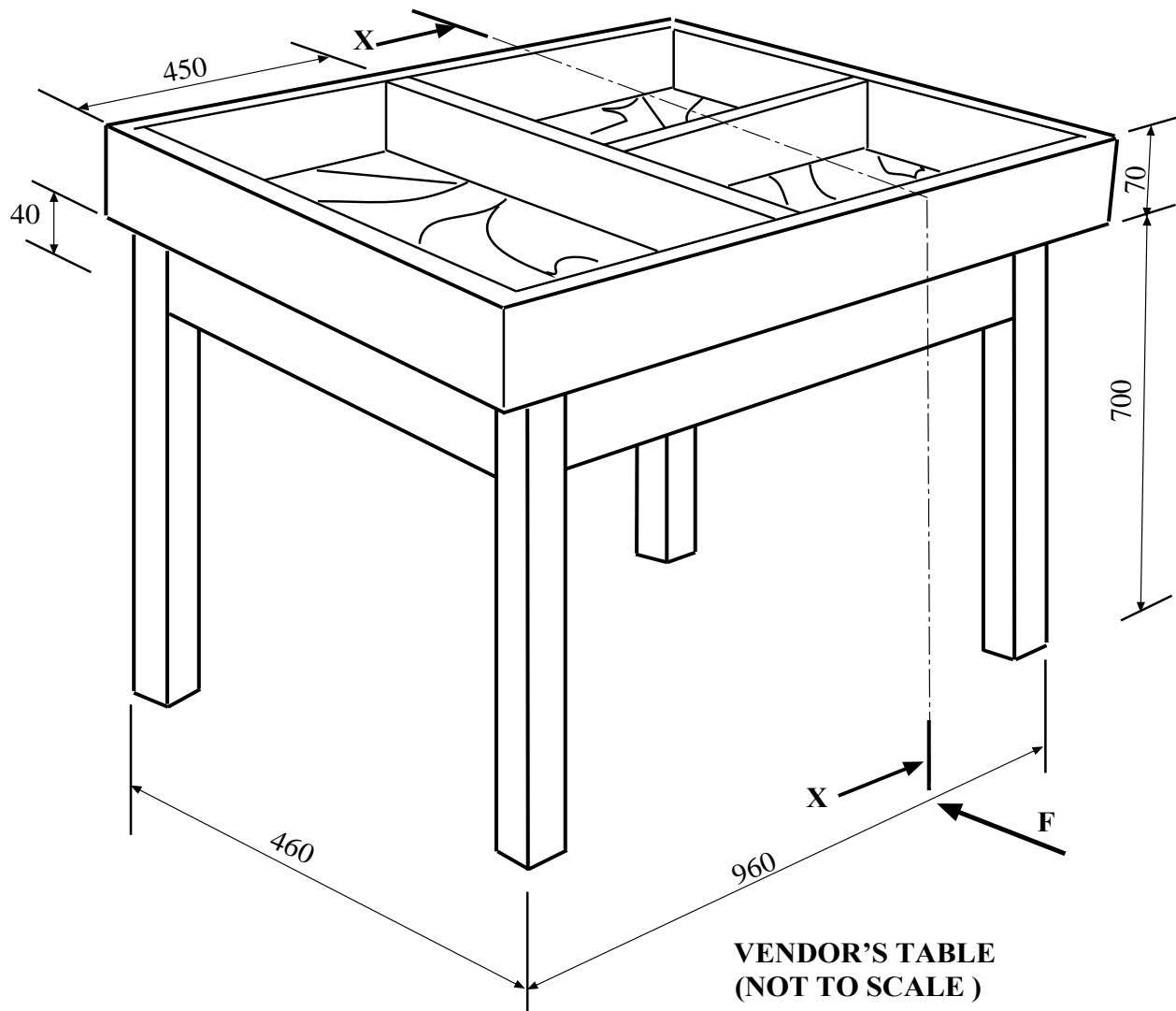


## SECTION C – DESIGN

## 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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