

SMZ

**ZANZIBAR EXAMINATIONS COUNCIL
FORM THREE ENTRANCE EXAMINATION**

059**CARPENTRY AND JOINERY****TIME 2:30 HOURS****FRIDAY 1ST DECEMBER, 2017 AM****INSTRUCTIONS TO CANDIDATES**

1. This paper consists of sections A, B and C.
2. Answer ALL questions in sections A, B and any two questions from section C.
3. All answers must be written in the space provided.
4. Write your examination number on every page of this booklet.
5. Calculators and cellular phones are not allowed in the examination room.
6. Use blue or black pen in writing. The diagram must be drawn in a pencil.

FOR EXAMINER'S USE ONLY					
QUESTION NUMBER	MARKS	SIGNATURE	QUESTION NUMBER	MARKS	SIGNATURE
1			9		
2			10		
3			11		
4			12		
5			13		
6			14		
7			15		
8					
TOTAL					

This paper consists of 12 printed pages.

SECTION A : (20 Marks).

Answer ALL questions from this section.

1. a) Choose the letter of the correct answer and write it below the item number in the table below.

i) The following are contents of first aid kit except

A. Gauze B. Cotton wool C. Iodine solution D. A pencil

ii) A safety is a combination of knowledge, skills and awareness to prevent

A. Injury to a person B. Theft in workshop

C. Damage to workshop equipments and materials

D. injury to a person and damage to a person

iii) The inspeicious irregularities in the direction of the fiber usually produce

A. A very attractive figure

B. Blister figure

C. Bird's eye figure

D. Ribbon figure

iv) During planning the first side to plane is

A. Face age

B. Face side

C. Face to face

D. Any face.

v) The bench hook is equipment used to

A. Support work piece on the bench

B. Support work piece while cutting shoulder of the tenon.

C. Support and hold glued piece together

D. Support narrow piece while drilling.

vi) The seeds of hardwood trees are usually enclosed in

A. Cones

B. Fruits

C. Crowns

D. Resinous

ANSWERS

Item number	i	ii	iii	Vi	Vi	vi

b) Write **T** for a true statement and **F** for a false statement in a table given below

- i) Steel rule is made up of stainless steel and there is no mark used
- ii) Try squares are used to draw lines at right angles parallel or to check trueness of the plane surface.
- iii) The lead pencil is generally used in marking double lines
- iv) Compass or dividers are used for drawing arch and circles

ANSWERS

Item number	i	ii	iii	iv
Answer(T or F)				

- 2: Match the items in **List A** with the responses in **List B**. Write the letter of the correct response below the item number in the table below.

LIST A		LIST B
i.	The flattening of the cells during drying is	A. Twisting
ii.	Is any variation of the piece of timber from a flat surface that occurs as a result of uneven shrinkage	B. Shakes
iii.	Situation where exterior surface of the timber dries before the interior is dried.	C. Decay
iv.	Is a separation of wood along the grain usually in the direction of the rays.	D. Cupping
v.	A curvature along the wide surface in the direction of the length of the board	E. Bowing
vi.	A concave curvature across the face of a board is known as	F. case-hardening
vii.	The distortion or curvature along the edge of a board.	G. Check
viii.	Is a spiral distortion of the board along its length.	H. Collapse
ix.	Decomposition of timber caused by fungi that feed on the cell wall and cell content.	I. Spring
x.	Is a partial or complete split between adjoining layers of the timber.	J. Warping
.		K. Live knot
		L. Dead knot
		M. Surface check
		N. Radial shakes

ANSWERS

Item number	i	ii	iii	iv	v	Vi	Vii	viii	Ix	x

SECTION B: (40 Marks)

Attempt ALL questions in this section.

3: a) Define the following terms as used in woodwork

i) Carpentry

ii) Joinery

b) Name any three (3) types of measuring tools.

4: a) What do you understand by the term conversion of timber?

b) List down two (2) methods that are used for conversion of timber.

5: a) Why machines are preferred over hand tools?

b)

Briefly explain the following terms.

i) Marking

ii) Rebating

6: a) Give an example of a woodworking tool that can be used to maintain the job smoothness.

b) Name two (2) types of planes.

7: a) List down any two (2) types of woodworking machines that can be found in a carpentry workshop.

b) Write down any two (2) advantages of timber seasoning.

8: a) Define a knot.

b) Distinguish between a live knot and a dead knot.

9: a) Write down two (2) characteristics of a soft wood.

b) List down two (2) features of a hard wood.

10: a) Give an alternative name of the following:

i) Deciduous tree.

ii) Coniferous tree.

b) Write down any two (2) objectives of placing first aid kit in a workshop.

11: a) Differentiate between sawing and planing.

b) Name any two (2) types of bench planes.

12: Identify the main parts of a woodworking bench.

SECTION C: (40 Marks)

Attempt any two (2) questions in this section.

13: a) Draw a neat diagram of a rep saw. In your diagram, show the following parts,

- | | |
|-------------|------------|
| i) Handle | (ii) Teeth |
| (iii) Blade | (iv) Back |
| (v) Toe | (vi) Heel. |

b) Distinguish between a Key hole saw and Compass saw.

14: a) Identify any four (4) characteristics of a good timber.

b) i) Why it is necessary to preserve wood?

ii) What is the purpose of using chemical preservatives?

c) Explain three (3) methods that are used to preserve wood.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

15: a) What is equilibrium moisture content?

b) A piece of timber was 25mm thick, 0.1m wide and 3000mm long. When weighing it was found to be 120g before seasoning and 90g after seasoning.

- i) Determine the moisture content of the timber.
- ii) Find the density of timber before seasoning.
- iii) What is the density of timber after seasoning?

[illegible]