

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATION COUNCIL OF TANZANIA
FORM TWO NATIONAL ASSESSMENT**

072

ARCHITECTURAL DRAUGHTING

Time: 2:30 Hours.

Year: 2024

Instructions

1. This paper consists of sections **A**, **B** and **C** with a total of **seven (7)** questions.
2. Answer **all** questions.
3. Section A carries **15** marks; section B carries **45** marks and section C carries **40** marks.
4. All writing must be in **black** or **blue** ink and drawings must be in **pencil**.
5. Cellular phones and unauthorized materials are **not allowed** in the examination room.
6. Write your **Assessment Number** at the top-right hand corner of every page.

FOR EXAMINER'S USE ONLY		
QUESTION NUMBER	SCORE	EXAMINER'S INITIALS
1		
2		
3		
4		
5		
6		
7		
TOTAL		
CHECKER'S INITIALS		

SECTION A (15 Marks)

Answer **all** questions in this section.

1. Choose the correct answer from the given alternatives and write its letter in the box provided.

(i) Who is responsible for financing construction projects among the following building team members?

- A. An architect
- B. A general foreman
- C. A contractor
- D. A client

(ii) Which instrument will you use to draw a horizontal line when using an A1 drawing board?

- A. Tee-square
- B. Set square
- C. Protractor
- D. Compasses

(iii) An engineer is inspecting a floor plan drawing sheet for the site work. Which position should he locate the title block?

- A. At the lower left corner of the sheet
- B. At the lower right corner of the sheet
- C. At the centre part of the sheet
- D. At the upper right part of the sheet

(iv) Suppose you are required to make a pavement block in quadrilateral shape in which all of its side's angles are equal. What is the shape of the pavement block?

- A. Trapezoid
- B. Rhombus

C. Rhomboid

D. Trapezium

(v) Suppose you are practising to draw geometrical figures with a compass and a ruler. Which angle is not possible to construct with the instruments you have?

A. 60°

B. 45°

C. 40°

D. 120°

(vi) The projection where the projectors are parallel to each other and also perpendicular to the plane is referred to as

A. Perspective

B. Isometric

C. Oblique

D. Orthographic

(vii) You are asked to draw a perspective view of an object. Where will the projection lines converge?

A. At the vanishing point

B. At the ground line

C. At the horizon line

D. At the eye point

(viii) Which one is the shape of architectural drawing scale ruler?

A. Flat and hexagonal

B. Triangular and beveled

- C. Triangular and flat
- D. Triangular and hexagonal

(ix) How would you represent a diameter of a circular soak away pit when dimensioning?

- A. D
- B. Dia
- C. Ø
- D. d

(x) A draftsman must not use a scale which is either enlarging or reducing when drawing a plan of an object. Which scale should a draftsman use?

- A. 3:2
- B. 1:4
- C. 1:0.5
- D. 1:1

2. Match the description of architectural draughting lines in List A with the corresponding parts of a circle in List B by writing the letter of the correct response below the item number in the table provided.

List A	List B
(i) A straight line drawn through the center, meeting the circumference at both ends.	A. Chord
(ii) A straight line drawn from the center to the circumference.	B. Segment
(iii) A straight line drawn across the circle, meeting the circumference at both ends.	C. Tangent
(iv) A straight line which touches the circumference.	D. Sector
(v) Any part of the circumference.	E. Arc
	F. Diameter
	G. Radius
	H. Normal

SECTION B (45 Marks)

Answer **all** questions in this section.

3. (a) Why it is important to add auxiliary views on the orthographic projection?

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(b) Analyse four steps to be followed in drawing an auxiliary view.

- i.
- ii.
- iii.
- iv.

(c) Differentiate between secondary and partial auxiliary views.

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4. (a) Identify five factors that should be considered when selecting the appropriate pencil for a particular drawing.

- i.
- ii.
- iii.
- iv.

(b) Explain the use of the following grade of pencil in architectural draughting.

(i) Hard pencil lead

(ii) Medium pencil lead.

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5. A welder is required to choose among various drawing of the polygon in order to produce formwork for pavement blocks. If an ellipse is chosen;

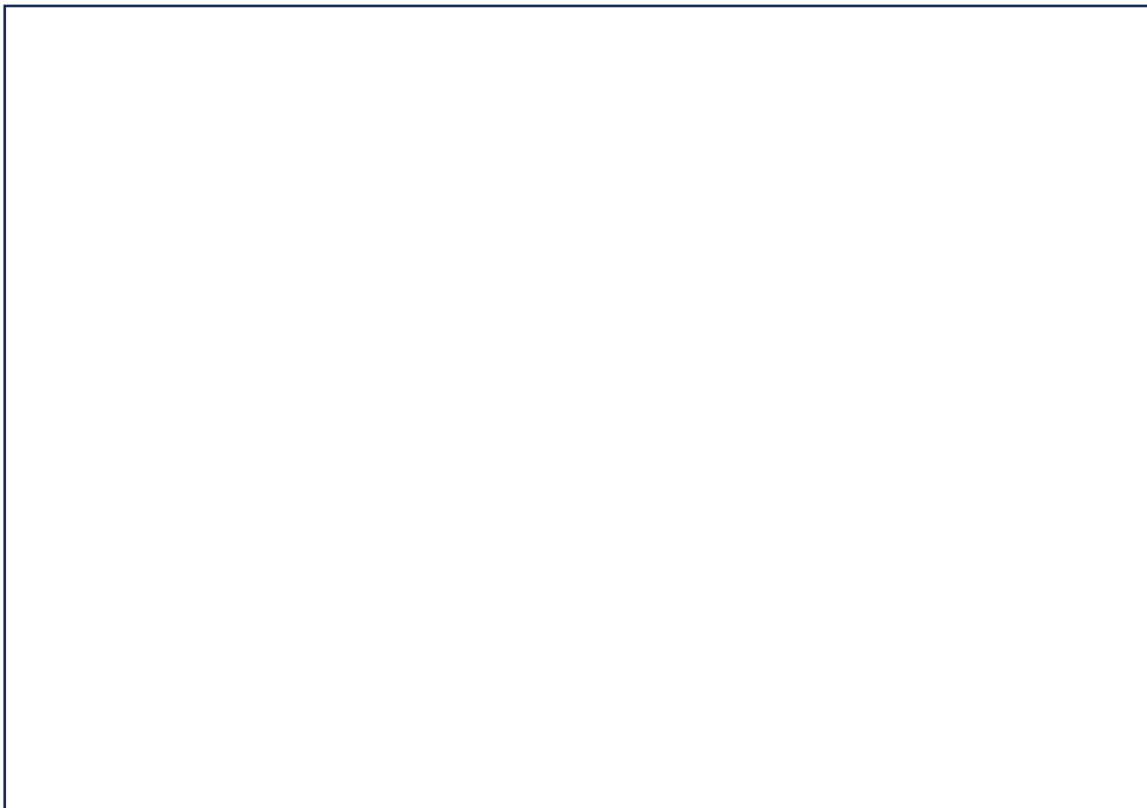
(a) Describe the shape of pavement blocks to be produced.

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(b) Draw an ellipse by using an auxiliary method given that the major and minor axes are 100 mm and 50 mm respectively.

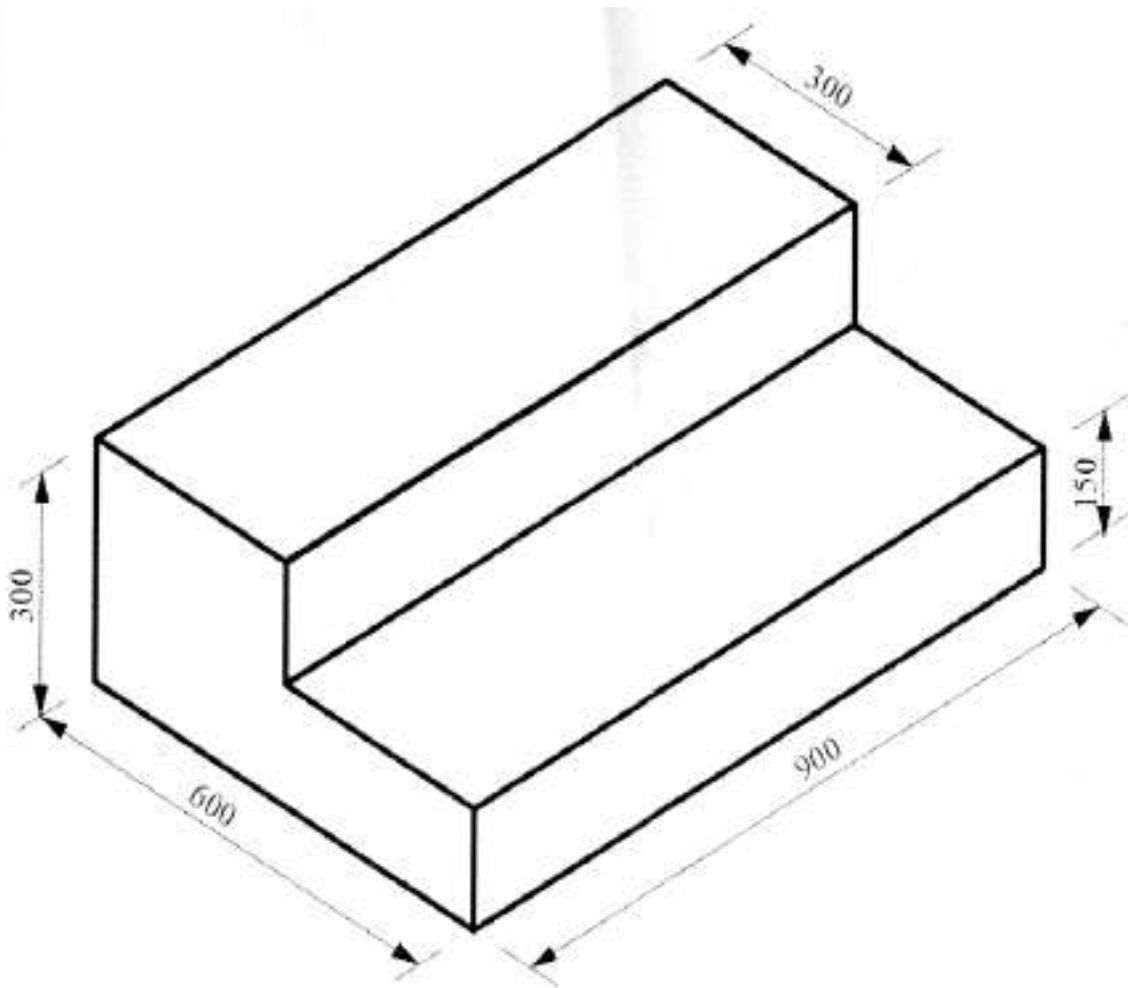


SECTION C (45 Marks)

Answer **all** questions in this section.

6. The figure below is a sketch of a residential house step. By using a scale of 1:10, draw:

- (a) The plan and front elevation of a step in first angle projection.
- (b) The cavalier oblique projection when given an oblique angle of 45° .



7. The figure below is a pictorial model sketch of a house with missing elevation. By using a scale of 1:100, draw:

- (a) The front elevation indicated by arrow T, right side elevation, and plan in third angle projection.
- (b) The isometric projection.

