

**THE UNITED REPUBLIC OF TANZANIA  
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA  
DIPLOMA IN TECHNICAL EDUCATION EXAMINATION**

**782**

**ARCHITECTURAL DRAWING**

**Time: 3 Hours**

**Thursday, 09<sup>th</sup> May 2019 a.m.**

**Instructions**

1. This paper consists of sections A and B with a total of **six (6)** questions.
2. Answer question number **one (1)** in section A and **four (4)** other questions from section B.
3. Question 1 carries **forty (40)** marks and the rest carries **fifteen (15)** marks each.
4. All drawings should be in pencil and drawings in section A should be prepared in **A3 Standard Paper** format.
5. Non - programmable calculators may be used.
6. Communication devices and any unauthorized materials are **not** allowed in the examination room.
7. Write your **Examination Number** on every page of your answer booklet(s).



1



Answer question number 1 in this section.

Architectural floor plan of a house with the following rooms and features:

- Rooms:** DINING ROOM, LIVING ROOM, KITCHEN, STORE, HALL, CAR PARK.
- Dimensions (mm):**
  - Overall width: 10,690
  - Overall depth: 10,690
  - Living Room width: 16,190
  - Dining Room width: 4,000
  - Kitchen width: 3,230
  - Store width: 0,230
  - Hall width: 1,720
  - Car Park width: 6,480
  - Car Park depth: 3,250
- Windows (W):** W1, W2, W3, W4.
- Doors (D):** D1, D2, D3.
- Stairs (S):** S-01.
- Other features:** A central staircase (S-01) is located between the living and dining rooms. A bathroom (WC) is located between the kitchen and the hall. A car park (D3) is attached to the right side of the house.

Figure 1

Scanned by CamScanner

### Windows

Height of window from the finished floor level (Living and Dining rooms) = 900 mm.

Height of window from the finished floor level (Toilet room) = 2,100 mm.

Window 1 (W1) = 4,000 mm x 1,500 mm.

Window 2 (W2) = 700 mm x 600 mm.

Window 3 (W3) = 2000 mm x 1,500 mm.

### Roof:

The pitch of the roof = Concrete flat roof 150 mm.

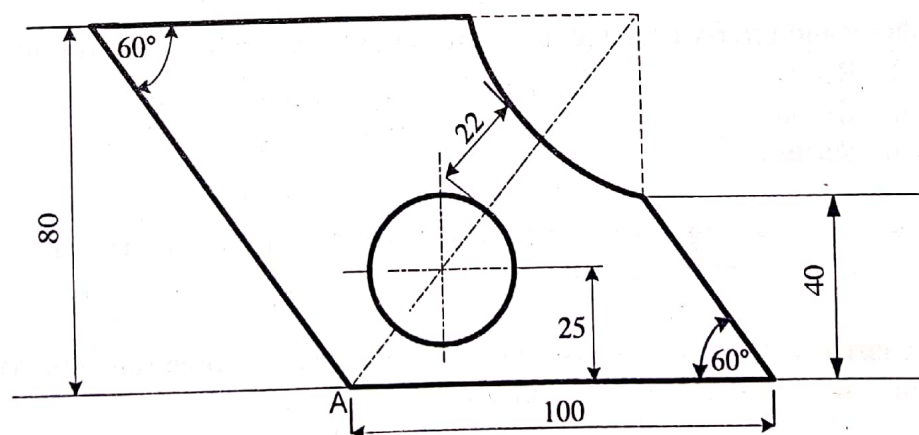
The eaves projection = Flush eave.

**Note:** Any other assumptions should be clearly shown.

## SECTION B (60 Marks)

Answer **four (4)** questions from this section.

2. (a) Explain the use of the following drawing tools:
- (i) Templates
  - (ii) French curves
  - (iii) Sand paper block
  - (iv) Tracing paper.
- (b) With the aid of sketch illustrations, briefly explain the following two basic systems of dimensions.
- (i) Size dimensions
  - (ii) Location dimensions.
3. The drawing in Figure 2 shows the plan of a metal template. Draw the given figure and construct a similar one whose sides have been enlarged by  $\frac{3}{4}$  by radial method from point A.



**Figure 2**  
All measurements are in millimetres



4. Figure 3 shows the orthographic projections of an object. Draw to a scale of 1:1 the isometric view by using box method.

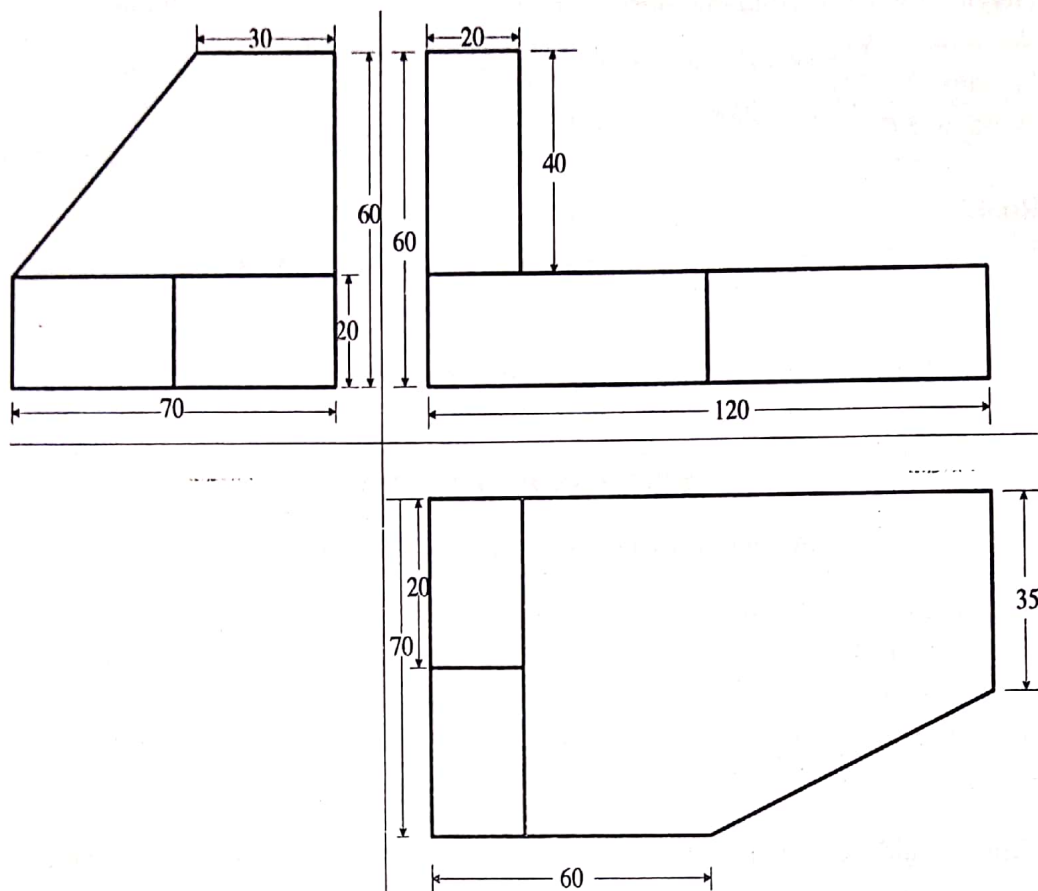


Figure 3

All measurements are in millimetres

5. (a) What does the term proportionality of letters mean?
- (b) Draw and briefly describe the characteristics of the following basic letter classifications:
- (i) Roman
  - (ii) Gothic
  - (iii) Script.
6. (a) List ten drawing instruments which are required to carry out drawing work smoothly including its inking works.
- (b) A circle with centre O has a radius of 2 cm. Determine the approximate circumference of that circle through geometrical construction.