



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY

Department of BUILDING & Civil engineering

UNIVERSITY EXAMINATION FOR:

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

ECV 4122 : ENGINEERING DRAWING II

END OF SEMESTER EXAMINATION

SERIES: APRIL 2025

TIME: 3 HOURS

Instructions to Candidates

You should have the following for this examination

-Drawing paper, examination pass and student ID

-Drawing set, set squares and T-square

This paper consists of **five** questions.

Attempt question ONE (Compulsory) and any other TWO questions

Do not write on the question paper.

QUESTION ONE (COMPULSORY) 20 Marks

Figure 1 shows the floor plan of a one-bedroom house. Redraw the **floor plan** neatly and to a scale of 1:50, ensuring all the following are clearly shown:

- a) Wall thicknesses and appropriate hatching
- b) Door and window positions
- c) Room names and dimensions
- d) Sanitary fittings and fixed furniture (e.g. wardrobe)
- e) Overall and internal dimensions

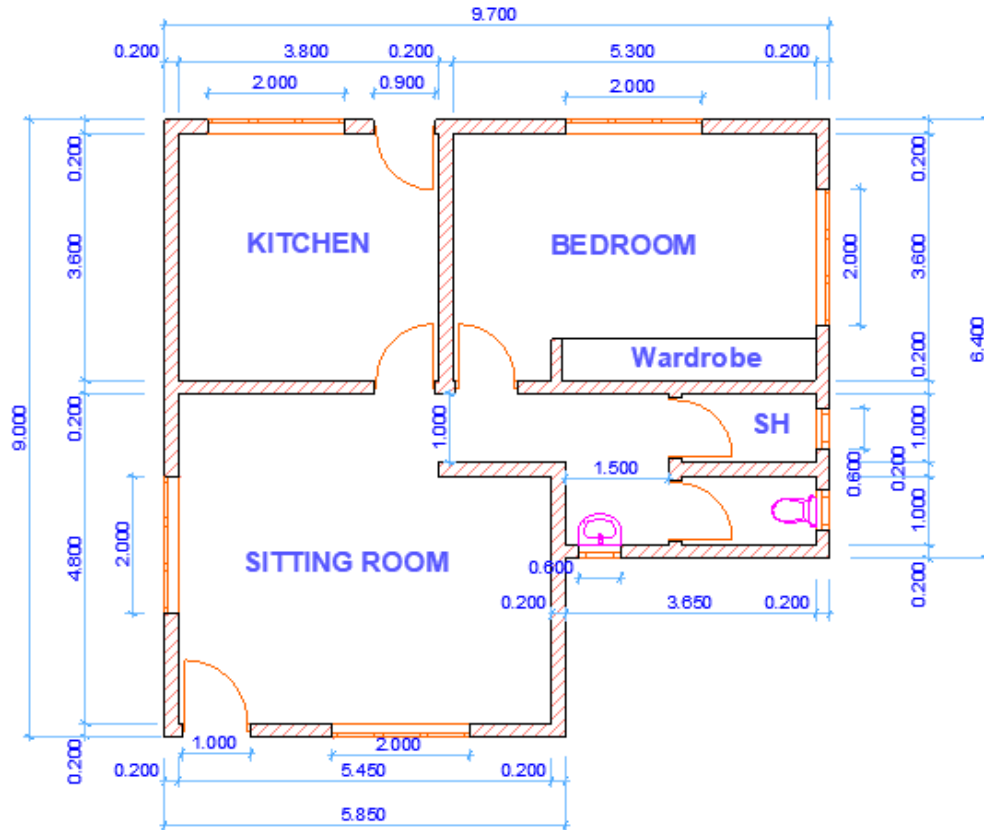


Figure 1

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO (20 Marks)

Using the floor plan provided in **Figure 2**, draw the **front** and **right-side elevations** of the house. Use a scale of 1:50

Your elevation drawings should clearly show:

- Door and window positions
- Roof structure and slope
- Plinth level and ground line
- Any visible architectural features (e.g., columns, gables, or verandahs)

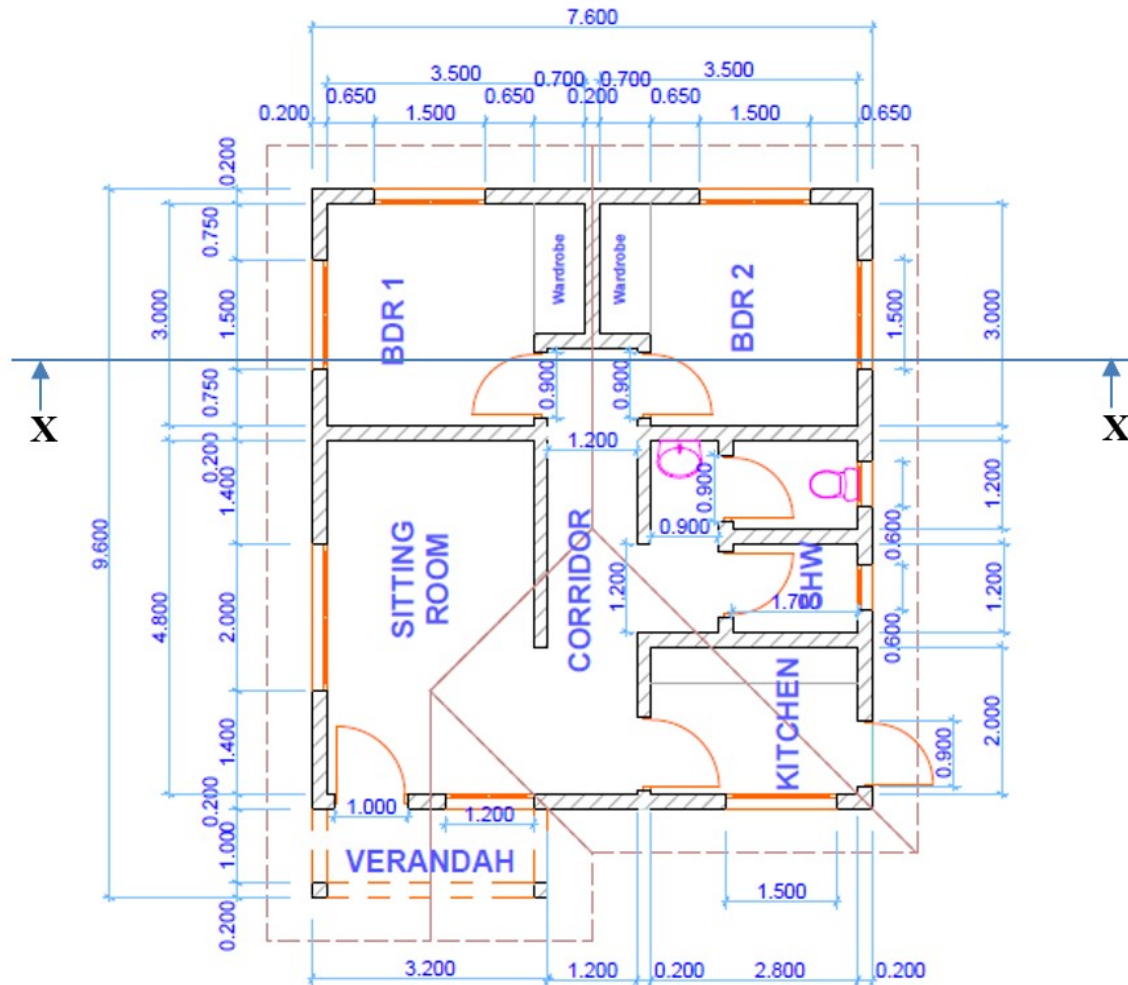


Figure 2

QUESTION THREE (20 Marks)

Using the floor plan provided in **Figure 2**, draw a detailed **electrical layout plan** for a two-bedroom house.

- Include the correct placement of switches, sockets, lighting points, and any other relevant electrical fixtures.
- Draw a legend (key) that clearly explains all the electrical symbols used in your layout.

QUESTION FOUR (20 Marks)

- Using **Figure 2** as a reference, draw a detailed **site plan** for the proposed two-bedroom house. (12 Marks)

Assume the house will be constructed on a 30 m × 25 m plot of land. Use a scale of 1:200.

Your drawing should include:

- i. The location of the house on the plot with appropriate
- ii. Access road and entry point
- iii. Plot boundaries and dimensions
- iv. Basic landscaping features
- v. Drainage layout and septic tank

b) Draw a **block plan** showing the location of the site in relation to: (8 Marks)

- i. Surrounding plots and properties
- ii. Nearby roads and access routes

QUESTION FIVE (20 Marks)

Using the floor plan shown in **Figure 2**, draw a detailed **section X-X** of the two-bedroom house.

Your drawing should clearly show the following:

- a) Roof construction
- b) Wall details
- c) Door and window details
- d) Floor structure and finish
- e) Foundation details