MACHAKOS UNIVERSITY

SCHOOL OF AGRICULTURAL SCIENCES

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

EGN 111: INTRODUCTION TO TECHNICAL DRAWING

DATE: **TIME:**

INSTRUCTIONS:

- **Answer your questions in the drawing papers provided**
- **This paper contains five questions.**
- **Answer question one [compulsory] and any other two questions**
- **Allow $1^1/_2$ hours for question 1 and 45 minutes for each of the other two questions.**
- **All dimensions are in millimetres unless otherwise stated.**
- **Construction lines should be faint and should not be erased.**
- **Accuracy and good line work are essential.**

QUESTION ONE (20MARKS)

a) The **Figure Q1(a)** shows isometric view of a Support base. Draw **twice full size** and using first angle projection, the following views: **Front**, **Top** and **Right side views.** Front view is indicated by the arrow A. Include all hidden details, show dimensions and projection symbol.

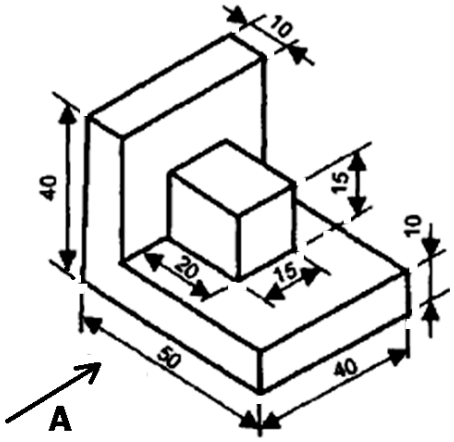


Figure Q1(a)

b) Draw, **twice full size**, an **oblique projection** of the component views shown in **Figure 1(b)** below, face **A** towards you. Hidden details are not to be shown. **Do not** indicate dimensions.

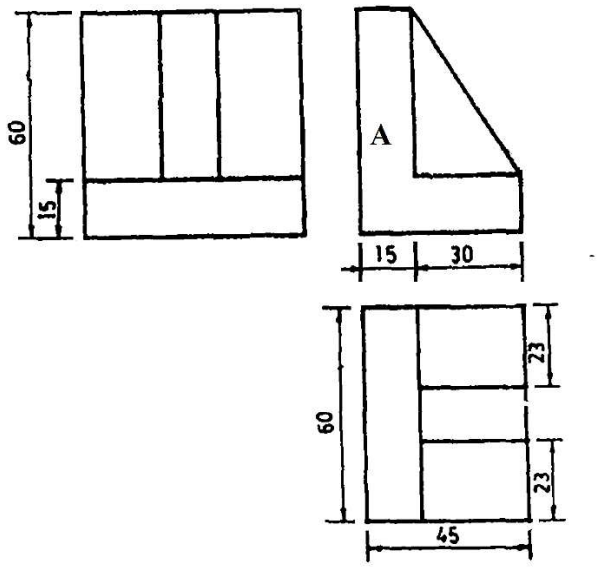


Figure Q1(b)

QUESTION TWO (20MARKS)

Figure Q2 below shows three views of a small object. Draw, **twice full size**, an **isometric projection** of the object. Corner A should be the lowest point of your drawing and face B on the right side. **Do not** indicate dimensions and hidden details.

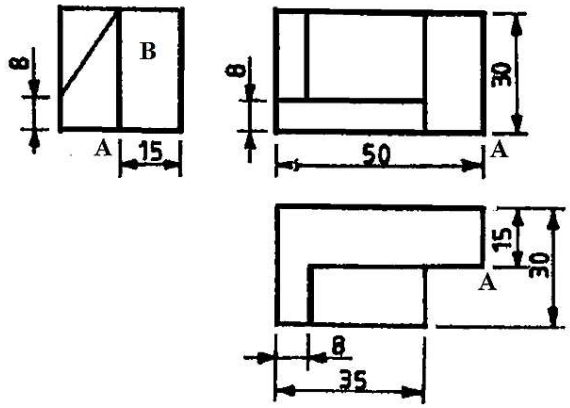


Figure Q2

QUESTION THREE (20MARKS)

Use **free hand** sketching to reproduce an isometric view of the zero grazing structure shown in **Figure Q3.** No hidden details are required.

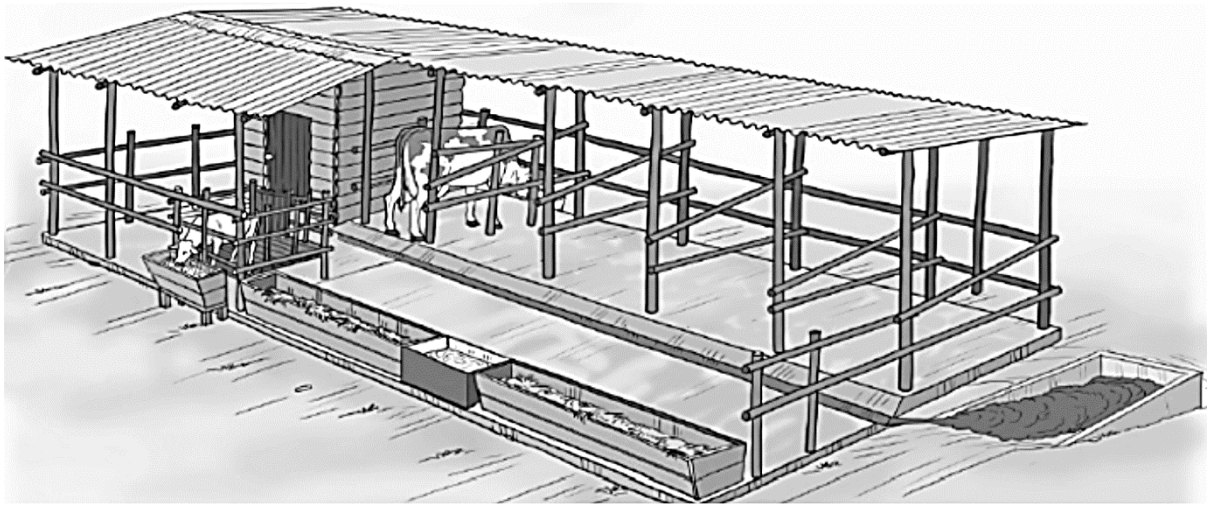


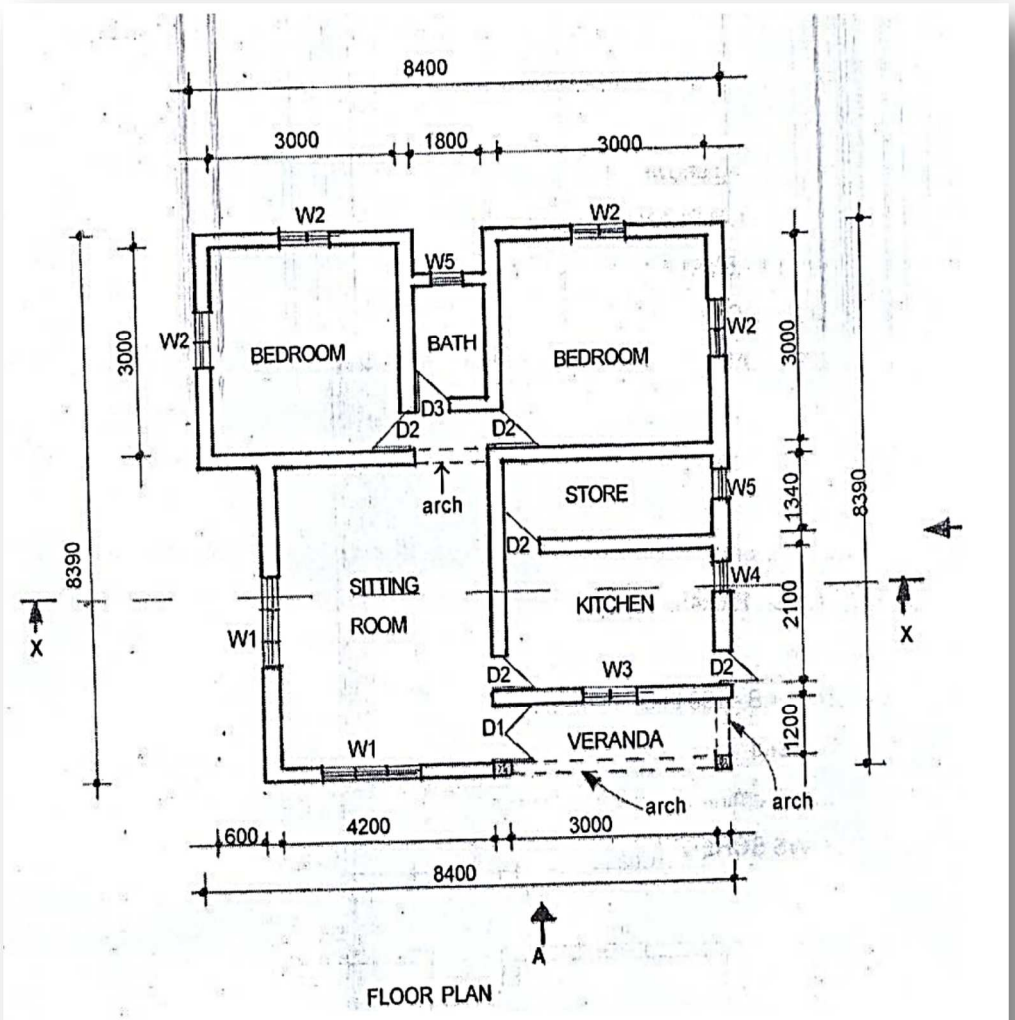
Figure Q3

QUESTION FOUR (20MARKS)

Figure Q4 drawing shows a two Bedroom Bungalow and its data. Draw the Given FLOOR PLAN to scale 1:100

QUESTION FIVE (20MARKS)

From **Figure Q4** FLOOR PLAN drawing of a two Bedroom Bungalow, draw: FRONT ELEVATION looking in the direction of arrow 'A' to scale 1:100, and RIGHT END ELEVATION to scale 1:100



USE THE FOLLOWING DATA

WALLS -150 thick blockwork

FOUNDATION FOOTING – 150 X 450

HARDCORE – 300 thick

CONCRETE FLOOR SLAB – 100 thick oversite

FLOOR FINISH – 50 screed

ROOF – Gable roof with Aluminum covering, 1200 Rise and H.W. Trusses.

DOORS AND WINDOWS SCHEDULE

D1 = 1200 X 2100	W1 = 1800 X 1200
D2 = 900 X 2100	W2 = 900 X 900
D3 = 750 X 2100	W3 = 600 X 600

Figure Q4