



**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

PROGRAMME: BSC ABE. II

COURSE CODE: ABE 202

TITLE OF PAPER: ENGINEERING DRAWING

TIME ALLOWED: TWO (2) HOURS

SPECIAL MATERIAL REQUIRED: DRAWING EQUIPMENT

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY TWO
OTHER QUESTIONS.**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN
GRANTED BY THE CHIEF INVIGILATOR**

SECTION I COMPULSORY

QUESTION 1

- a) Explain the statement that 'Drawing is a language of communication'.
[4 marks]
- b) What is the role of geometrical drawing in the production of engineering drawing?
[6 marks]
- c) Figure 1 (attached) shows a plan of Sibusiso Vilane Teaching centre.
- (i) Label any two Location and two Size dimensions on the drawing;
[4 marks]
 - (ii) Identify any three incorrect dimensioning practices.
[6 marks]
- d) Figure 2 shows an isometric view of a structural corner bracket. Draw the following views:
- (i) Front view in the direction of the arrow; [7 marks]
 - (ii) Plan, and [7 marks]
 - (iii) End elevation from the right [6 marks]

SECTION II ANSWER ANY TWO QUESTIONS

QUESTION 2

- a) Discuss the benefits of using conventions in drawing
[7 marks]
- b) What are the objectives of development of surfaces in production of objects?
[5 marks]
- c) What are the common types of development processes used in drawing
[8 marks]

- d) Figure 3 shows the front elevation and plan of a lamp shade. Draw the development of the fabric that will cover the lamp shade, allowing for 5 mm of cloth at the ends for the finishing folds.
- [10 marks]

QUESTION 3

- a) How has Computer Aided Drawing revolutionised the production of engineering drawings?
- [5 marks]
- b) Distinguish between 'snap' and 'object snap' [OSNAP] as used in AutoCAD.
- [6 marks]
- c) How does the use of 'Object snap' improve drawing operations on the screen?
- [7 marks]
- d) Describe three ways by which you would start drawing a line.
- [12 marks]

QUESTION 4

- a) Distinguish between dimension lines and extension lines as used in sizing of objects in drawing.
- [10 marks]
- b) Figure 4 shows shows both isometric and orthographic views of a machine block. Some lines are missing in the orthographic views. Complete the missing lines in the views.
- [10 marks]
- c) A house whose extreme dimensions measure 21 x 17 m is to be used drawn on an A2 paper. Determine the scale if the drawing must fit in one quarter of the paper.

CANDIDATE'S No. _____

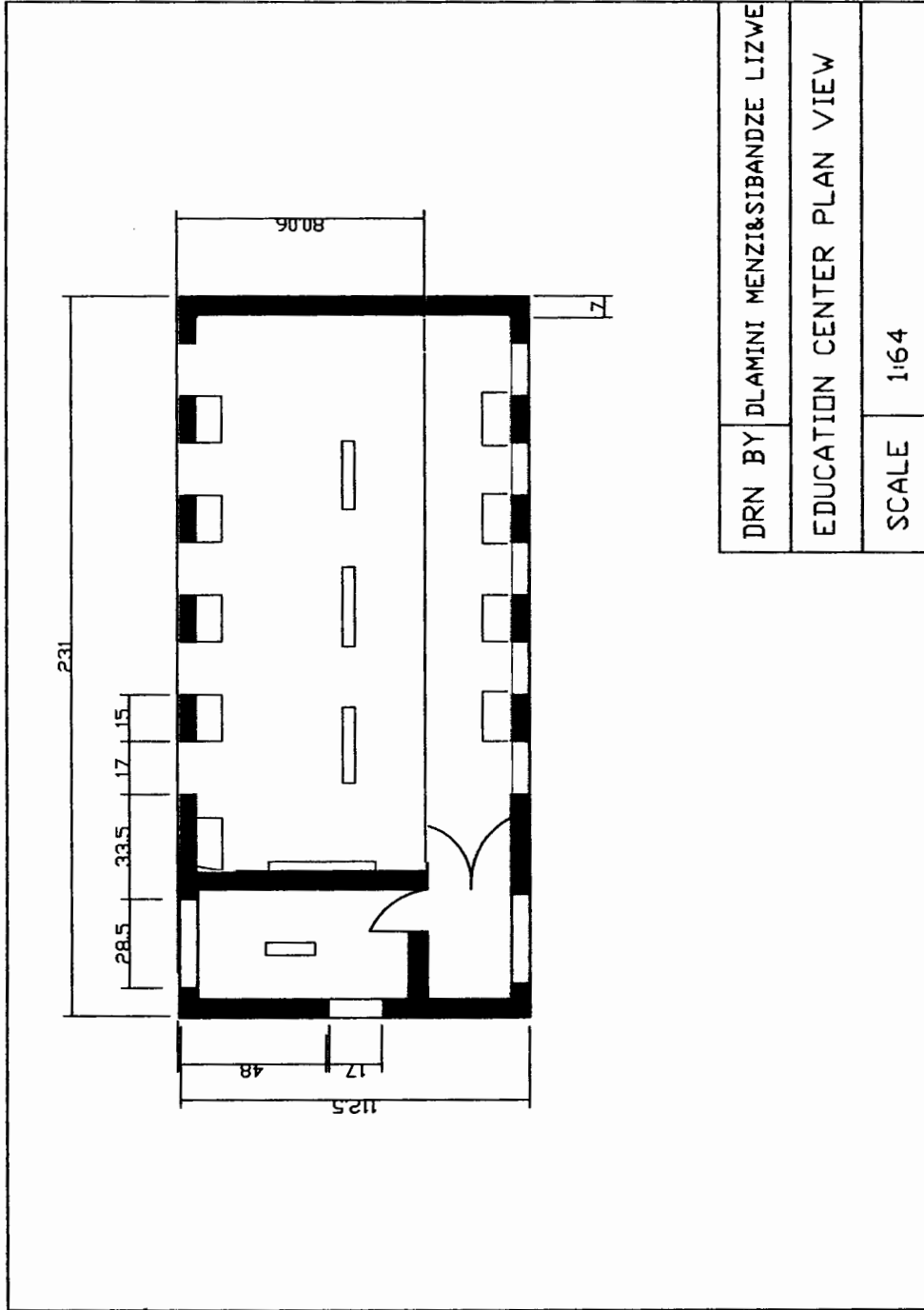


Figure 1. Plan view of a learning centre.

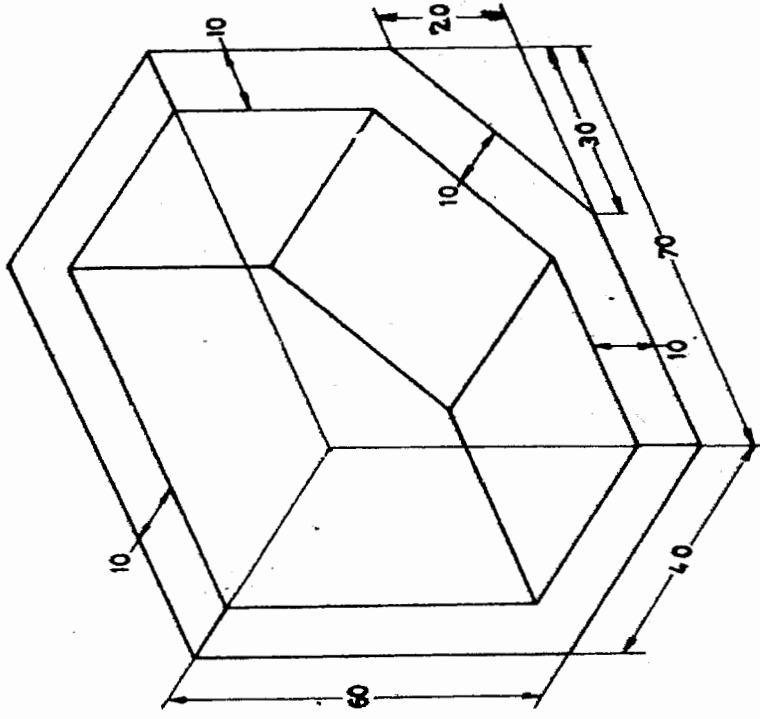


Figure 2. Structural corner bracket.

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Solution to Figure 2.

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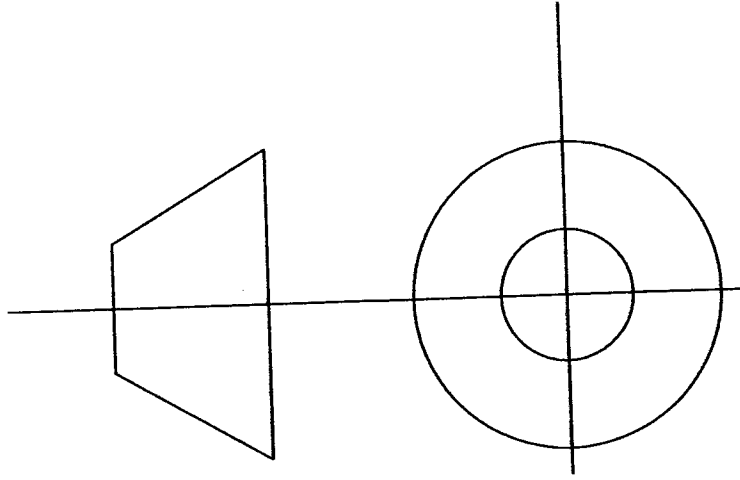


Figure 3 Development of a lamp shade fabric

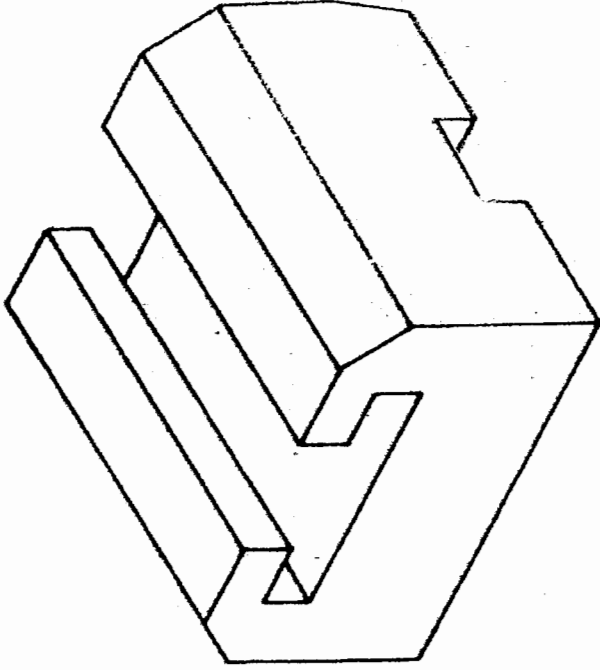


Figure 4a Isometric view of a holding bracket

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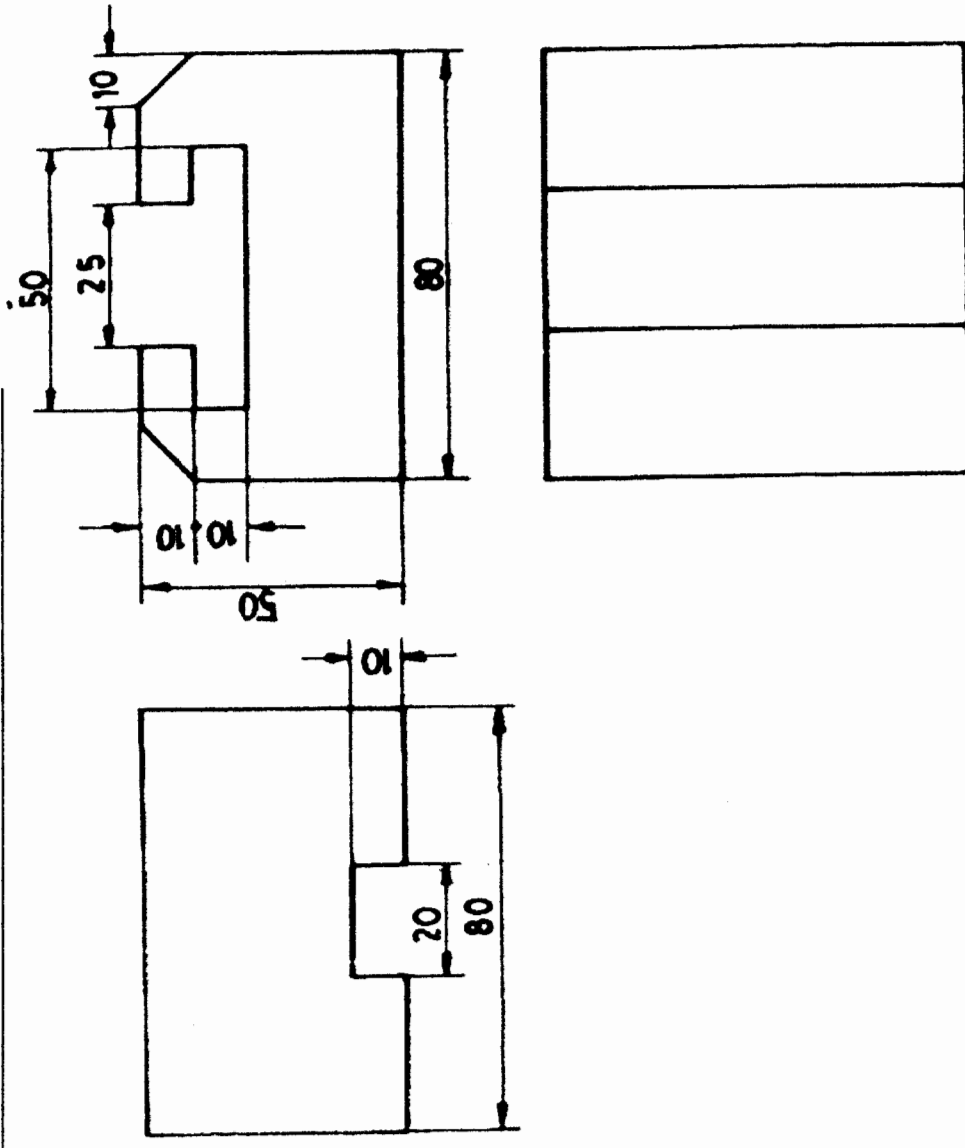


Figure 4 Orthographic Views of a holding bracket