14

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.

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SECTION I   COMPULSORY

QUESTION 1

a)   Distinguish between blueprint drawing and engineering graphics.

[6 marks]

b)   Comment on the statement that "Descriptive Geometry is the grammar of engineering drawing".

[6 marks]

c)   A house whose dimensions are 25 m long, 15 m wide and 3.5 m high is to be drawn on an A3 drawing paper. Determine the scale that would be used to draw the orthographic presentation of the house (include all steps used to determine the scale)

[14 marks]

d)   Figure 1 shows a sliding block for a tool post of milling machine. Complete the missing details in the orthographic views.

[14 marks]

SECTION II   ANSWER ANY TWO QUESTIONS

QUESTION 2

a)   Using 'Windows' and 'AutoCAD' to clarify you answer, distinguish between Computer Operating software and Computer Application software.

[10 marks]

b)   Describe three ways of drawing a line using AutoCAD

[6 marks]

c)   Figure 2 shows the display screen of an AutoCAD 2007 drawing
        programme.

     i)   Name the parts labelled 1, 2 and 3

                                                              [6 marks]

     ii)   Describe the functions of the parts 1 and 2.

                                                              [8 marks]

QUESTION 3

Draw the orthographic views of the holding block shown in Figure 3 using
First angle projection. Indicate the symbol for the convention used.

                                                              [30 marks]

QUESTION 4

a) (i)   What is a primary auxiliary view?   [5 marks]

   (ii)   Name any three common primary auxiliary views.   [6 marks]

    (iii)   Are orthographic projections of Figure 3 sufficient for production
            of the block or is it necessary to draw auxiliary views?   [3 marks]

            Give reasons for your answer.   [6 marks]

b)   Explain the significance of sectioning in the construction of buildings.
                                                              [4 marks]

c)   Provide any three common application of sectioning types.
                                                              [6 marks]
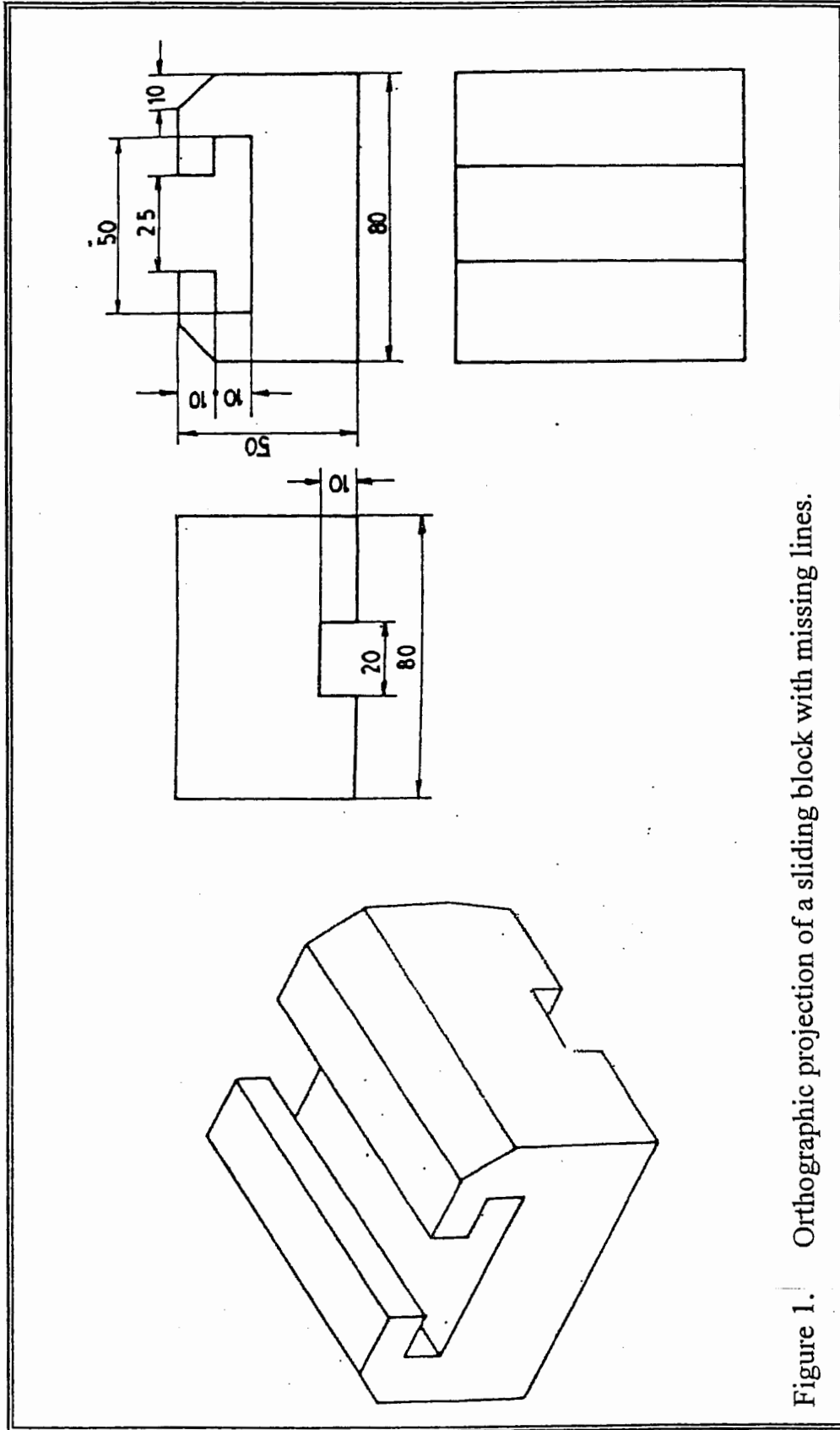
Candidate's Number _____

Figure 1.   Orthographic projection of a sliding block with missing lines.
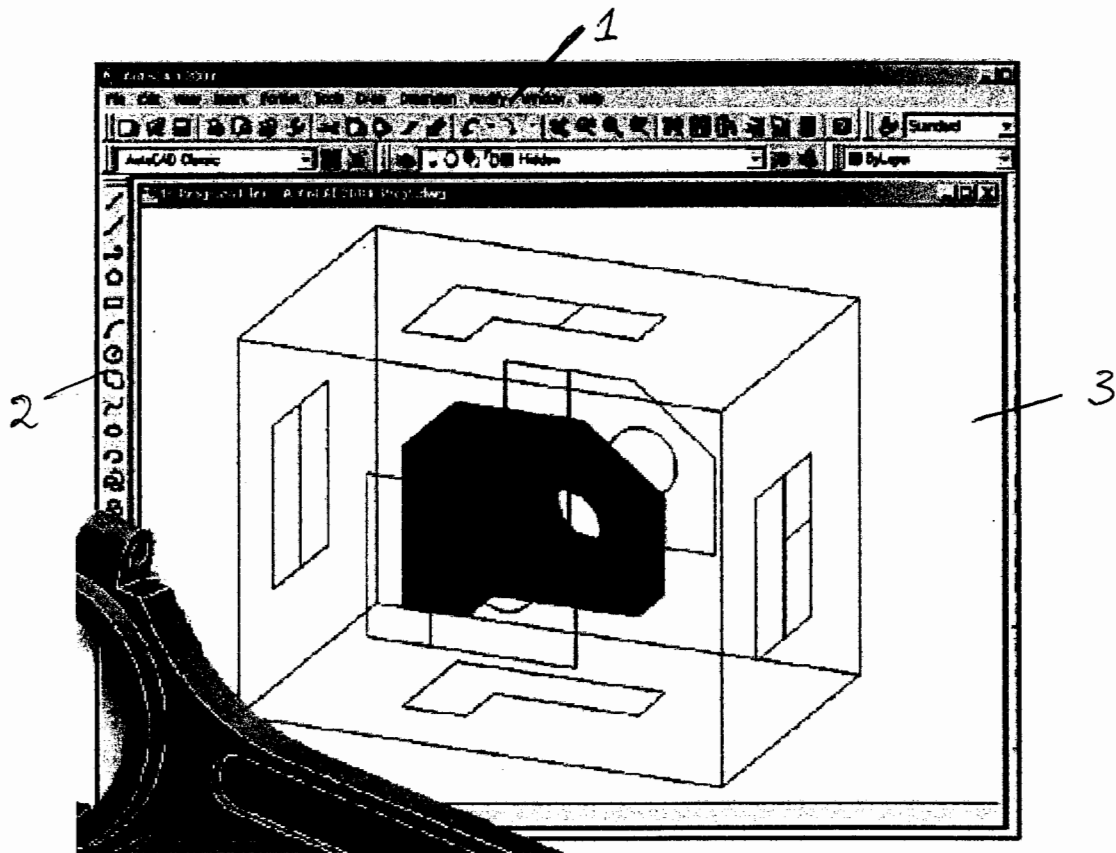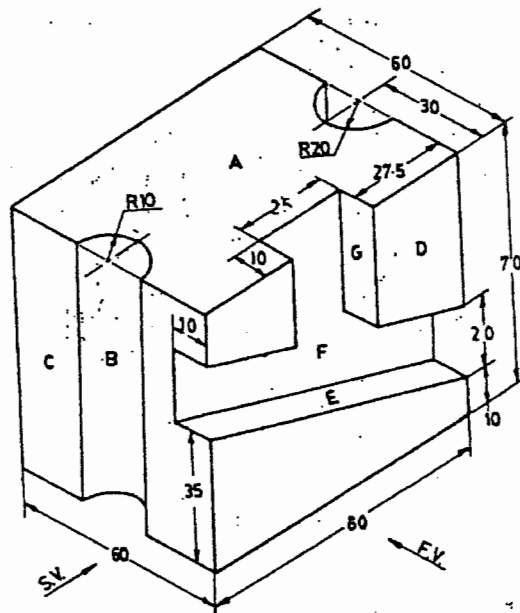
Figure 2 Monitor display of an AutoCAD programme

Figure 3   A tool holding block