



**UNIVERSITY OF SWAZILAND  
SUPPLEMENTARY 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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GRANTED BY THE CHIEF INVIGILATOR**

## SECTION I COMPULSORY

## QUESTION 1

- a) What is the advantage of using orthographic projection to draw objects? [5 marks]
- b) Given the advantage in a), Why is it still necessary to have auxiliary views of objects? [5 marks]
- c) Figure 1 shows two views (a and b) of a shaft guide block. The same dimensions are represented on the views.
- Which view shows the correct presentation of dimensions? [4 marks]
  - Give reasons for your answer. [6 marks]

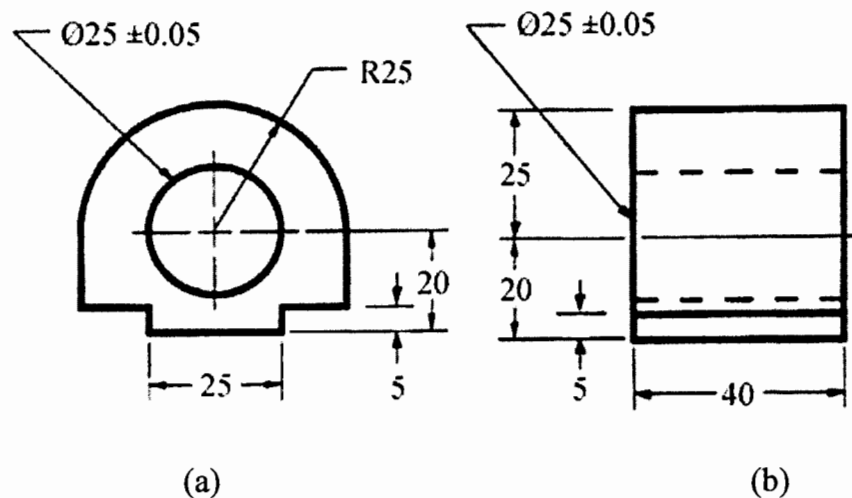


Figure 1 A hollow slide block

- d) What is the purpose of sectioning? [3 marks]
- Name five types of sections commonly used in drawing to show inner details of objects. [5 marks]
- Give examples of where such sections are used [5 marks]
- e) What solid of revolution would one get by rotating a right angled triangle about an axis on one of the edges forming the right angle? [3 marks]
- f) What plane shape would produce a frustum of the same solid of revolution? [4 marks]

**SECTION II ANSWER ANY TWO QUESTIONS**

**QUESTION 2**

- a) Assembly drawings are common in engineering applications.
  - i) What is an assembly drawing? [3 marks]
  - ii) Why are assembly drawings often presented in sectional views? [5 marks]
  - iii) Name any five standard parts that are not normally shown on sectioned views of assembly drawings. [5 marks]
- b) What is the effect of object snap in drawing using AutoCad? [5 marks]
- c) Describe three ways in which you would toggle the object snap function into being active. [12 marks]

**QUESTION 3**

- a) Figure 2a shows a pictorial view of a corner holding bracket. The orthographic projection shown in figure 2b has missing lines. Fill in the missing lines. [15 marks]

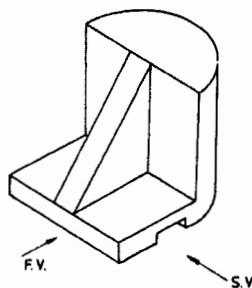


Figure 2a Pictorial view of a corner holding bracket

- b) Discuss the principle of projection used in establishing the views shown in figure 2b. [10 marks]
- c) Sketch the standard symbol for the angle of projection used. [5 marks]

CANDIDATES NUMBER: \_\_\_\_\_

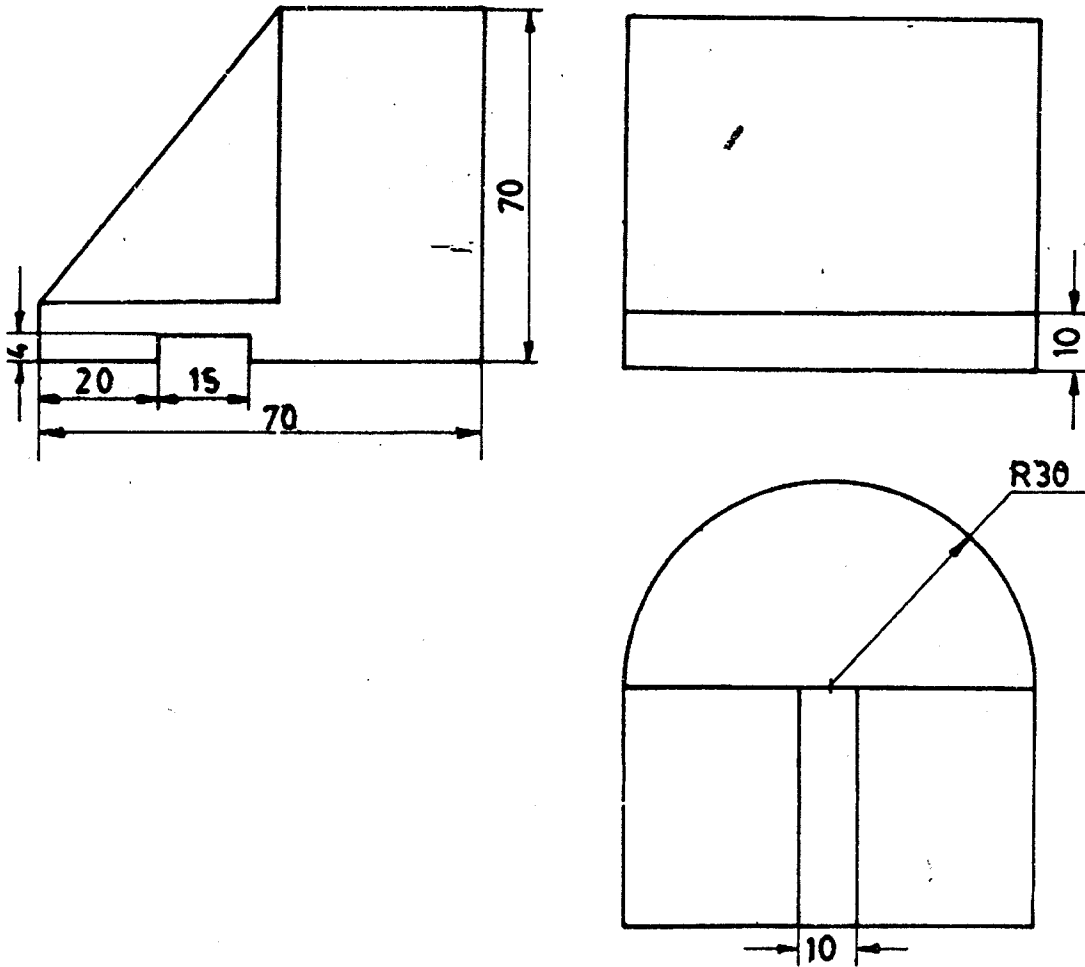


Figure 2b Orthographic projection of a corner holding bracket

**QUESTION 4**

- a) Discuss the benefits of using layers in Computer Aided Drafting. [5 marks]
- b) Compare the effectiveness of Computer Aided Drafting to mechanical drafting in the production of engineering drawings. [10 marks]
- c) Sketch a layout of a drawing paper indicating how you would apportion it and what you would include in each of the paper sections apportioned. [10 marks]
- d) What information is normally included in the title block of a drawing? [5 marks]