



**UNIVERSITY OF SWAZILAND  
FINAL EXAMINATION PAPER**

**PROGRAMME: BSC LWM II (LWM)  
BSC LWM III (LWM)**

**COURSE CODE: LUM 202 (NEW PROGRAMME)**

**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) What is the advantage of using orthographic projection to draw objects? [5 marks]
- b) Given the advantage in a), Why is 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?

Give reasons for your answer.

[10 marks]

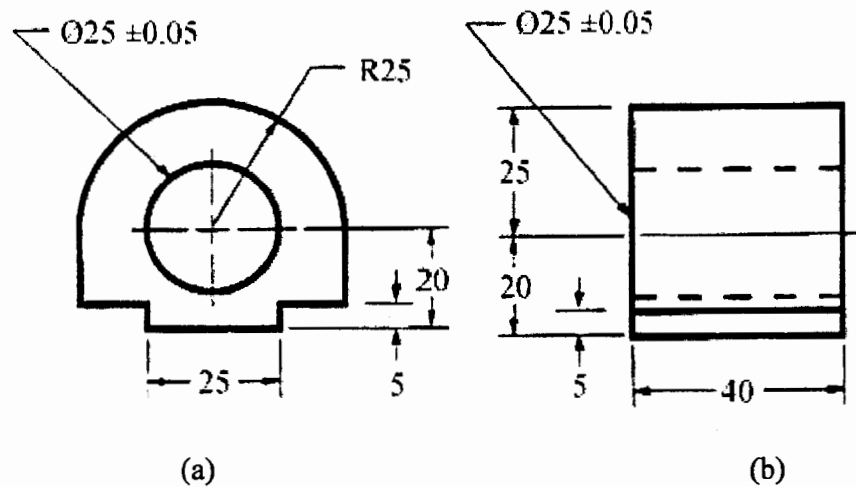


Figure 1 A hollow slide block

- 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 triangle about an axis on one of its edges? [7 marks]
- What plane shape would produce a frustum of the same solid of revolution?

**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 is it common to find sectional views of assembly drawings? [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]

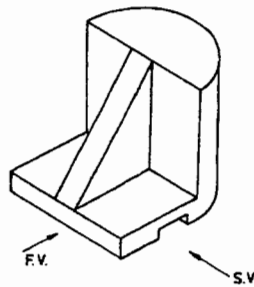


Figure 2a Pictorial view of a corner holding bracket

- b) Discuss the principle of projection used in establishing the views shown in figure 2b. [15 marks]
- c) Sketch the standard symbol for the angle of projection used. [5 marks]

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

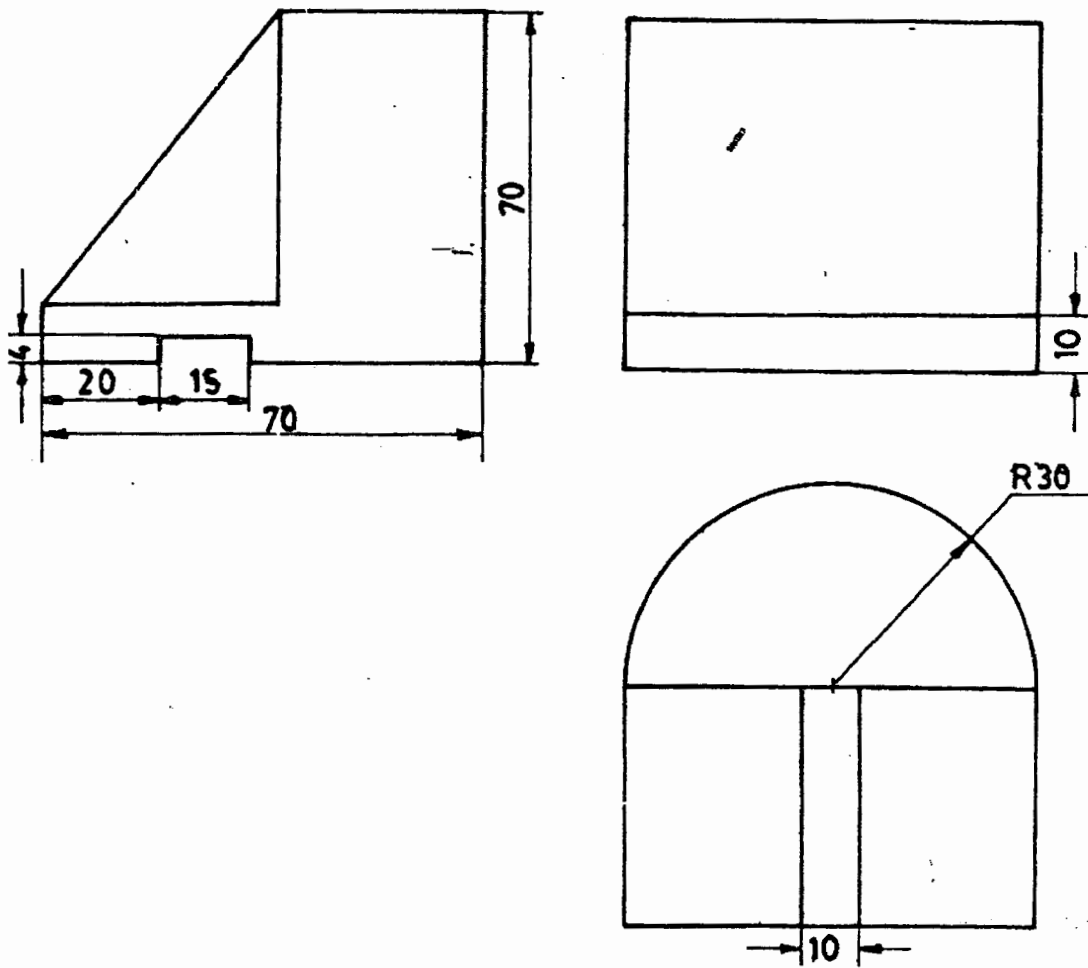


Figure 2b Orthographic projection of a corner holding bracket

**QUESTION 4**

- a) What are layers as used in computer aided design?  
[5 marks]
- b) Briefly discuss the advantages of using computer aided design to traditional methods of drawing?  
[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]