



**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

**PROGRAMME: BSC LWM. II
BSC LWM. III**

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.**

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GRANTED BY THE CHIEF INVIGILATOR**

SECTION I COMPULSORY

QUESTION 1

- a) Figure 1 shows concept of using layers in AutoCAD. Describe the procedure you would follow to remove the text and dimension layers (two layers) from the drawing. [10 marks]
- b) Use the method of principal planes and quadrants to distinguish between first angle and third angle projection in engineering drawing. [10 marks]
- c) Distinguish between isometric, and orthographic projection. [10 marks]
- d) Figure 2 shows orthographic projection of a solid. Fill in the missing views and any missing lines. [10 marks]

[10 marks]

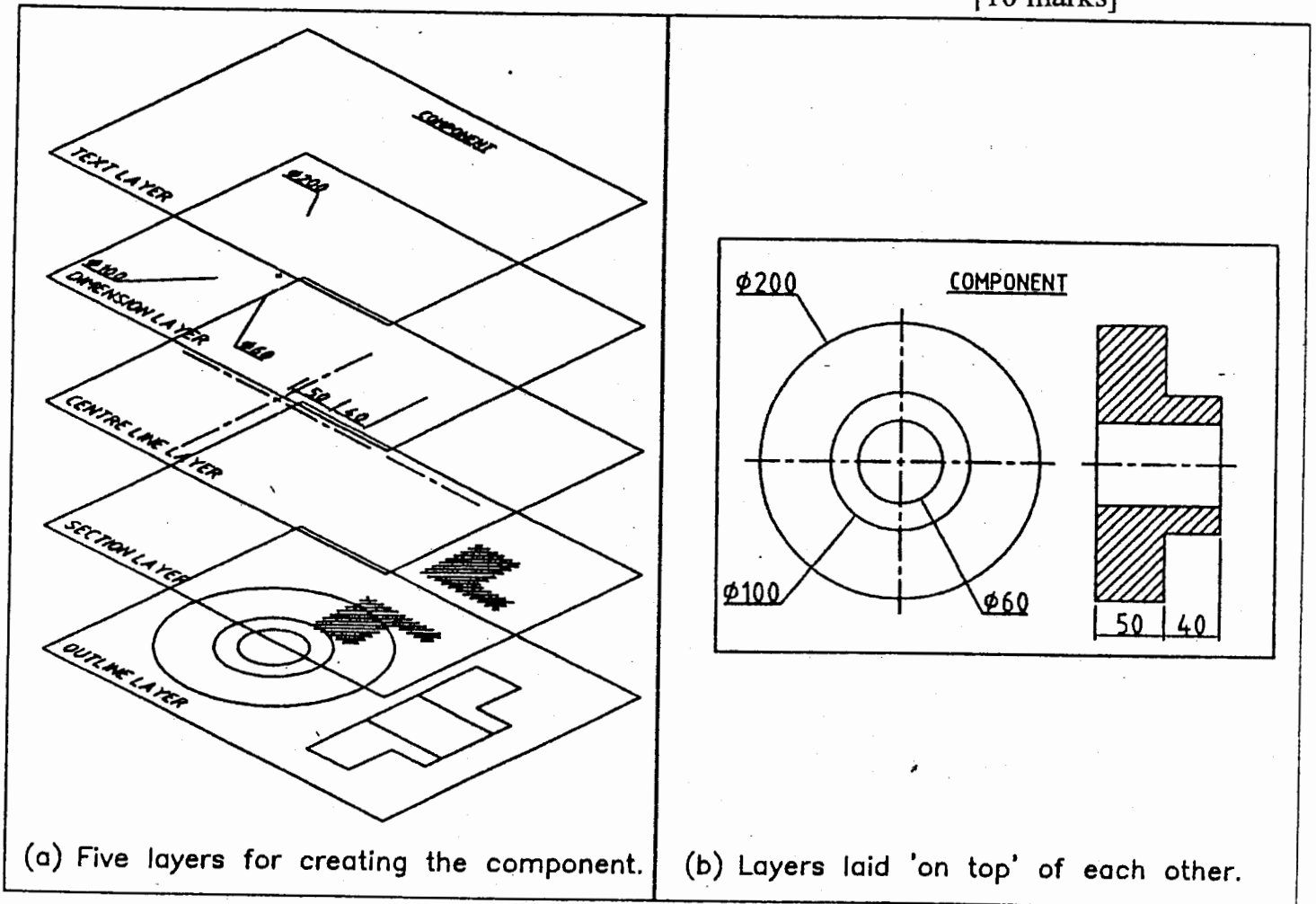


Figure 1. Concept of layers in AutoCAD drawings.

SECTION II ANSWER ANY TWO QUESTIONS**QUESTION 2**

- a) Figure 3 shows a perspective drawing of a machine holding block. Mark any five size and five location dimensions on the drawing by circling {s} and {L} respectively.

[10 marks]

Mark also any two of the following:

- i. Dimension lines as {DL};
- ii. Extension lines as {EL};
- iii. Lead lines as {LL}.

[4 marks]

- b) What is a primary auxiliary view? [4 marks]
 Name any three primary auxiliary views commonly used. [3 marks]
 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]

QUESTION 3

- a) Name any five types of sectional views used in drawing [10 marks]
- b) A cube of side 40 mm rests on its square face in the horizontal plane, with the base edge inclined at 30° to the vertical plane. A cutting plane parallel to the vertical plane and perpendicular to the horizontal plane cuts at a distance of 10 mm from the centre of the cube. Draw the sectional front view and the plan.

[20 marks]

QUESTION 4

- a) Figure 4 shows various types of pencils on the market. Make three major groups of the pencils. [6 marks]
 Give examples of where the pencils of each group are mainly used. [4 marks]
- b) Describe on the following parts of the autoCad hardware:
- i. Digitizing tablet and puck [5 marks]
 - ii. Display monitor [5 marks]
 - iii. Printer [5 marks]
 - iv. Plotter [5 marks]

Candidate's Number _____

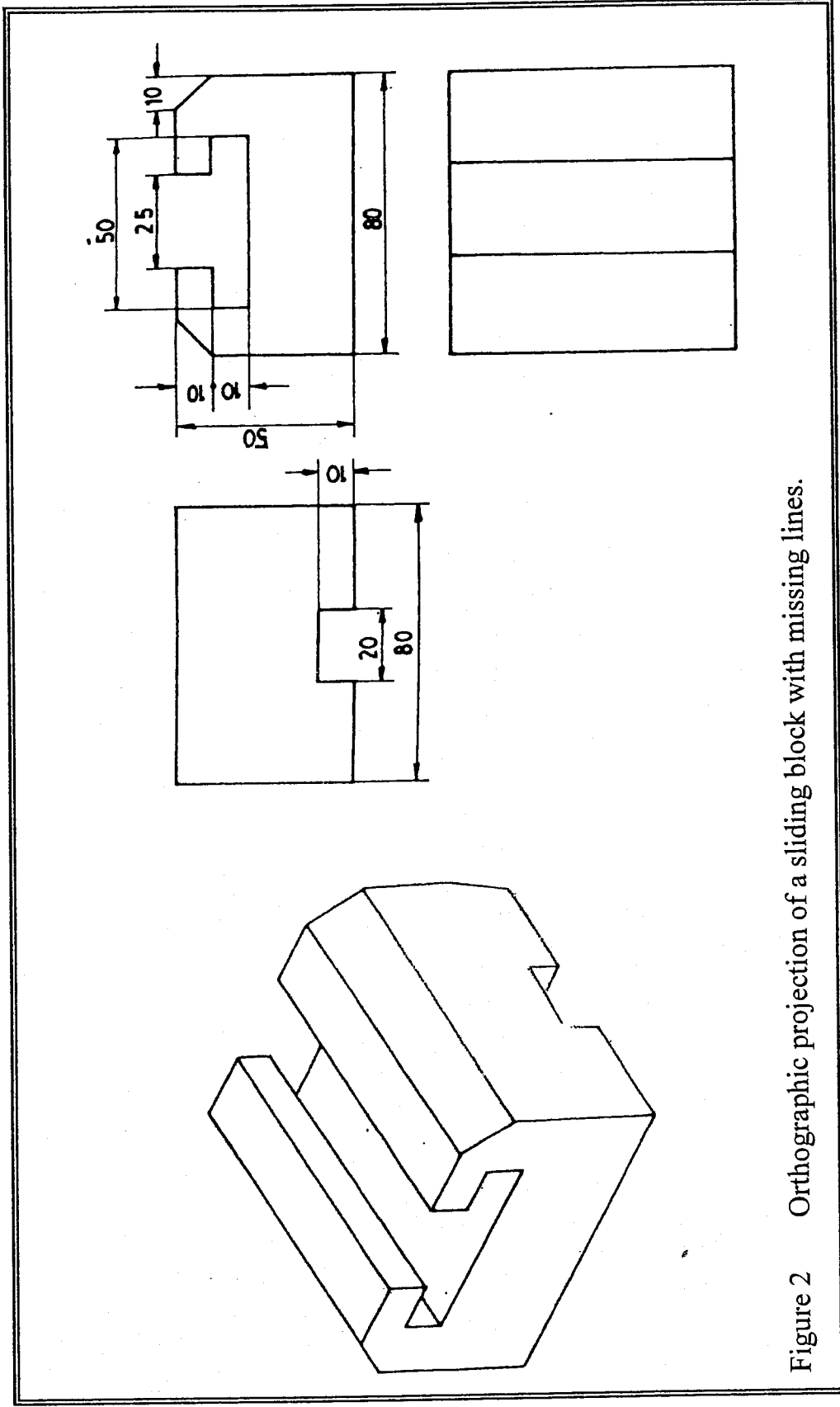


Figure 2 Orthographic projection of a sliding block with missing lines.

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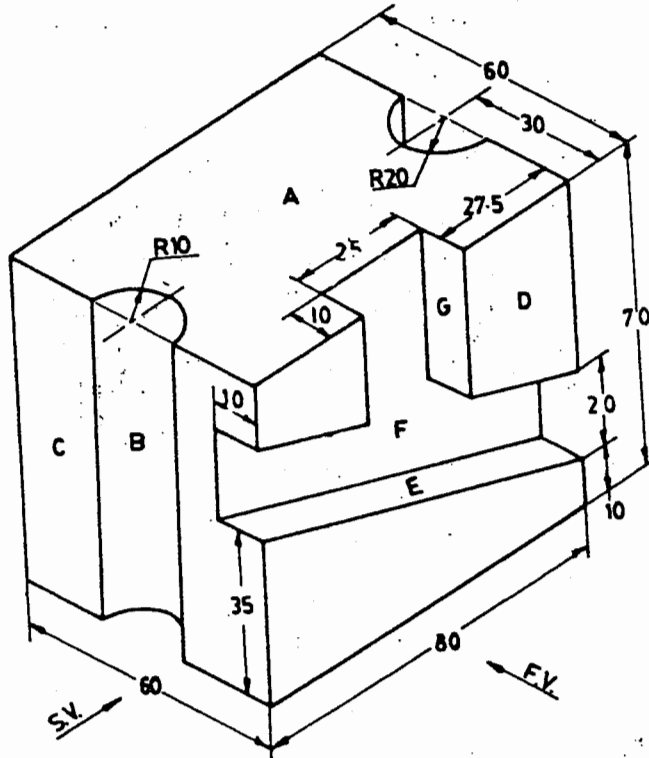


Figure 3 A holding block

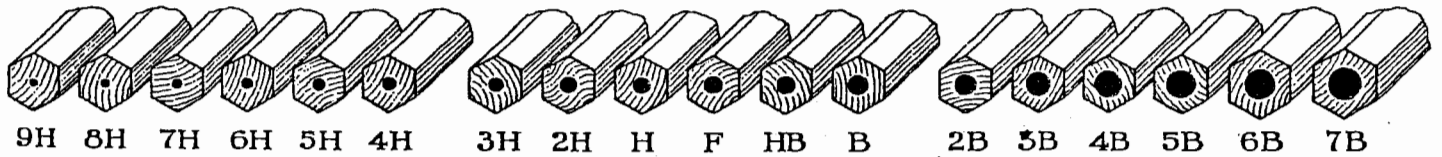


Figure 4. Pencil grade chart.