UNIVERSITY COLLEGE TATI

UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET	
COURSE CODE	: BME 1033
COURSE	: TECHNICAL DRAWING
SEMESTER/SESSION	: 2-2024/2025
DURATION	: 3 HOURS

Instructions:

1. This booklet contains 5 questions. Answer **ALL** questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO

THIS BOOKLET CONTAINS 6 PRINTED PAGES INCLUDING COVER PAGE

QUESTION 1

a) **Describe** why engineering drawing is called the universal language of engineers. (2 marks)

b) **Illustrate** two (2) elements of engineering drawing. (4 marks)

c) **Illustrate how** to bisect a line (AB). (8 marks)

Figure 1

d) **Interpret** what is shown in Figure 2. (6 marks)

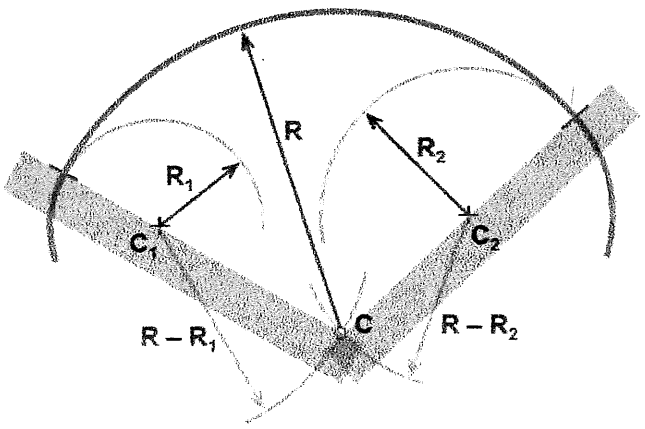


Figure 2

QUESTION 2

a) **Explain** two (2) common mistakes to avoid when creating and interpreting sectional views in technical drawings. (2 marks)

b) **Give** two (2) primary purposes of sectional view. (2 marks)

c) **Illustrate** how to properly indicate the cutting plane and direction of sight on a drawing when creating a sectional view. (4 marks)

d) **Illustrate** the differences between an offset sectional view and a straight sectional view. (6 marks)

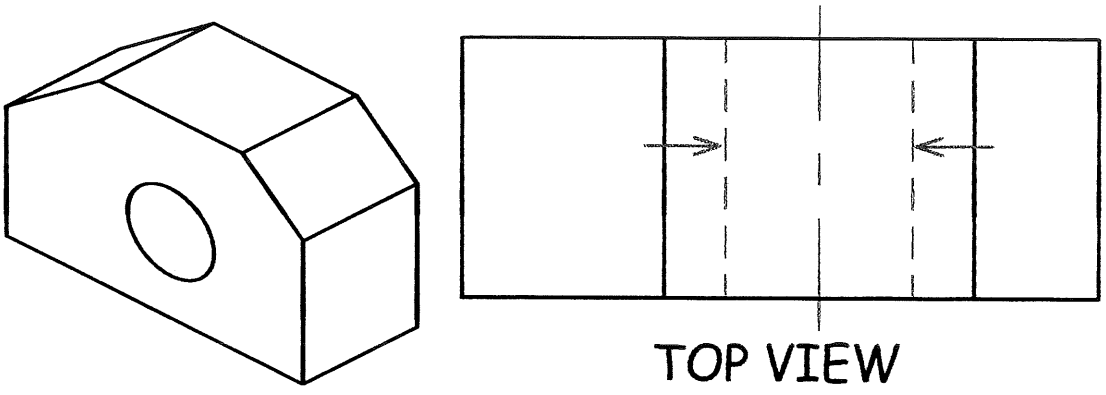
e) **Sketch** and **explain** the six steps of making an isometric projection. (12 marks)

QUESTION 3

a) **Explain** what an orthographic projection drawing is. (2 marks)

b) **Differentiate** between two (2) types of projection views for orthographic drawing. (8 marks)

c) **Interpret** what is shown in Figure 3. (6 marks)



(a) (b)

Figure 3

d) Figure 4 shows an isometric drawing with two suggested directions for viewing the front view, from A or B. **Choose** the best side to draw a front view and **justify** your answer.

(3 marks)

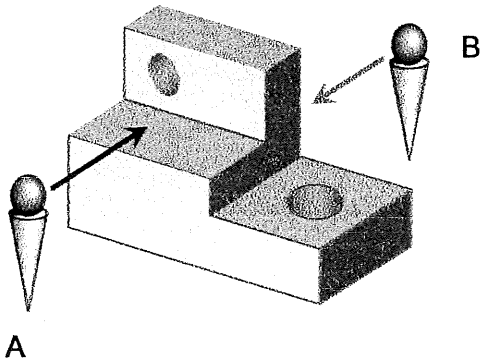


Figure 4

QUESTION 4

a) **Describe** what is a "Layer" in AutoCAD. (2 marks)

b) **Illustrate** the steps for the "Drawing Units" setup in AutoCAD. (6 marks)

c) You are given an isometric drawing (Figure 5) that needs to be converted into an orthographic drawing in full scale, employing 3rd angle projection. **Determine** six (6) possible layers that can be used in your AutoCAD drawing, together with their color, line type, and line weight.

(12 marks)

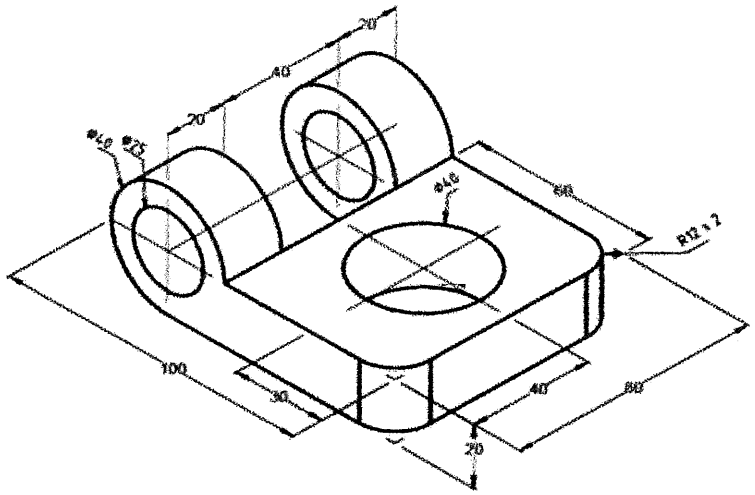


Figure 5

QUESTION 5

Figure 6 shows the isometric view of a part. **Sketch** the part in full scale, using 3rd angle projection.

a) **Sketch** the front view with standard dimensioning. (5 marks)

b) **Sketch** the top view with standard dimensioning. (5 marks)

c) **Sketch** the right side view with standard dimensioning. (5 marks)

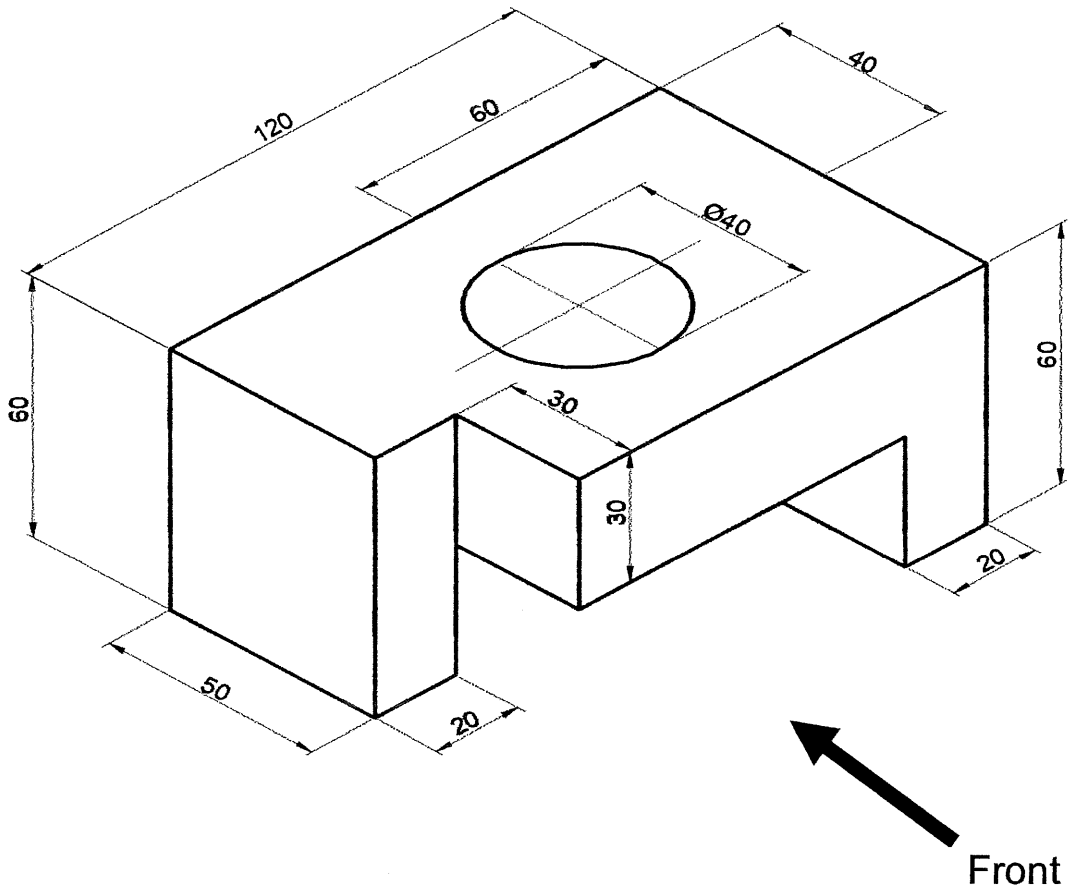


Figure 6

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