

LEAVING CERTIFICATE EXAMINATION, 1973

TECHNICAL DRAWING - COMMON LEVEL - PAPER II

FRIDAY, 22 JUNE - MORNING, 9.30 to 12

N.B. Answer either Section A or Section B

Section A (Engineering)

INSTRUCTIONS

- (a) All questions to be attempted.
- (b) Drawings and sketches should be in pencil.
- (c) Where dimensions are omitted they may be estimated.
- (d) Credit will be given for neat and orderly presentation of work.
- (e) Candidates must work on one side of the paper only.
- (f) The Examination Number must appear on each drawing sheet used.

1. Fig. 1 shows the details of a pulley pivot assembly. The parts of the assembly and the number required are as tabulated below.

Index	Part	No. required
1	Bracket	1
2	Hanger	1
3	Ball bearings	13
4	Nut	1
5	5 mm split pin	1

Draw full size the following views of the parts assembled:-

- (i) a front elevation, showing view A of the bracket and including all the hidden details.
(Letter the title 'FRONT ELEVATION')

- (ii) a sectional side elevation on X-X.

Show two ball bearings in each view. First or third angle projection may be used, but the projection selected must be stated on the drawing sheet.

(120 marks)

2. An exploded view of a flexible shaft coupling is shown in Fig. 2. Sketch freehand on plain drawing paper two views of the assembled coupling. One view should show a section and the other an outside view. Select views that will show the assembly most clearly. The views should be in orthographic projection and approximately full size to the dimension given ($\phi 150$ mm).

Letter the title FLEXIBLE COUPLING ASSEMBLY in block capitals 6mm high and state the type of projection used.

(40 marks)

3. (a) Trace in ink on the tracing paper supplied a modified front elevation of your solution to Question 1. The tracing should show a half sectional front elevation of the assembly. The cutting plane for the section should pass through the axis of the hanger.

OR

- (b) Design a spanner to suit the nut in Question 1. The design should be drawn in first angle projection and be a fully-dimensioned working drawing.

(40 marks)

Section B (Building)

INSTRUCTIONS

- (a) Answer four questions.
 - (b) All questions carry equal marks.
 - (c) Construction lines must be shown on all solutions.
 - (d) Write the number of the question distinctly on the answer paper.
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1. Fig. 1 shows the plan and section of a timber mould used for pre-cast concrete units. Draw the true shape of the surfaces A and B and determine the angle between the surfaces B and C. Scale 1 : 5.

2. Fig. 2 shows the plan of a hipped roof, with all pitches at 40° , which contains a rectangular chimney. Draw the plan and project the elevation to show the chimney in position. Show also a development of the hipped surface to include the opening for the chimney. Scale 1 : 100.

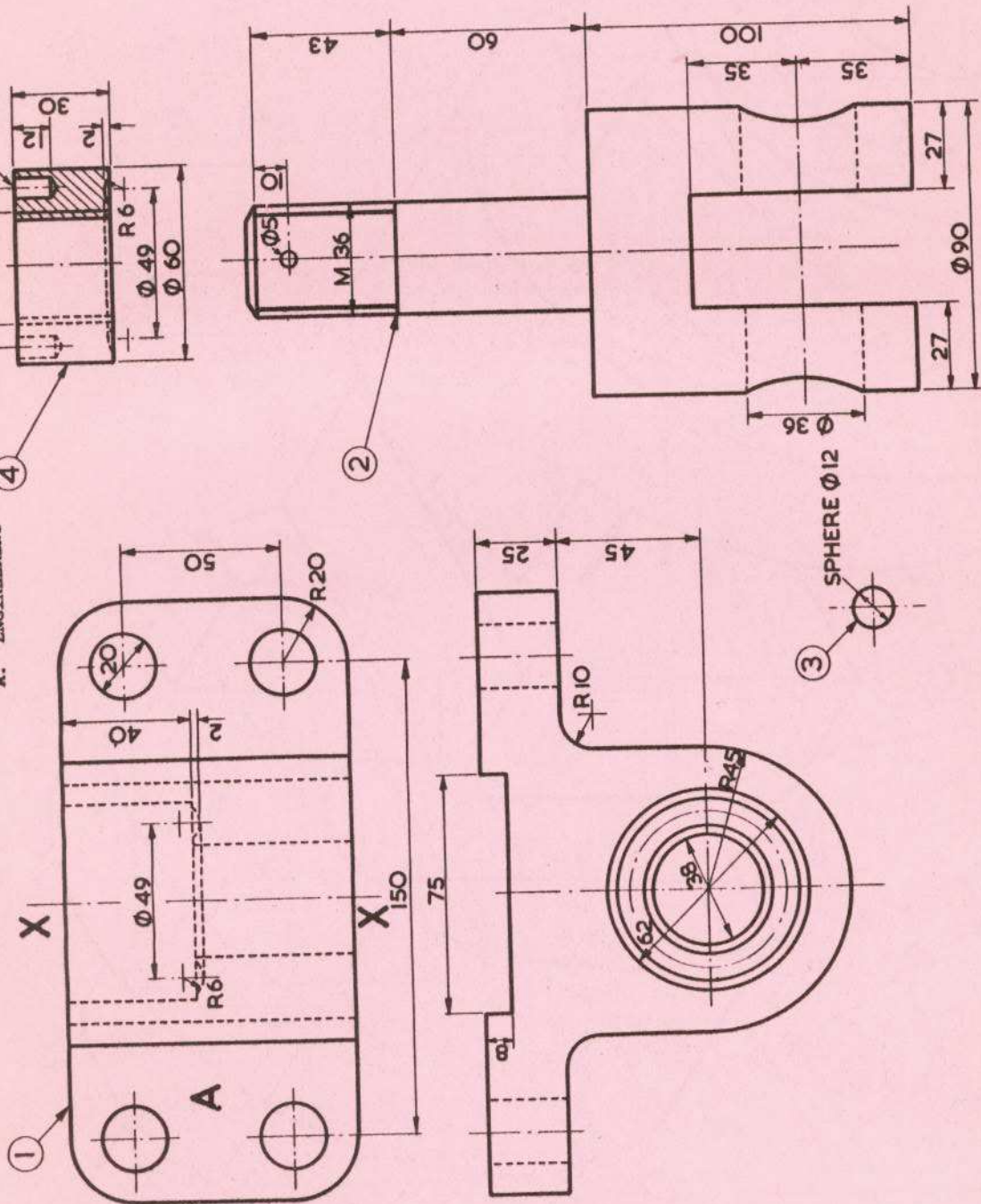
3. Fig. 3 shows the plan and elevation of a concrete column and capping. Draw the plan and elevation of the shadows cast when the direction of the light is as indicated by the arrows. Scale 1 : 10.

4. Make an isometric drawing of the wall and pier shown in plan and elevation in Fig. 4. Scale 1 : 10.

5. Fig. 5 shows the elevation of a square newel post into which is jointed a handrail whose cross-section is also shown. Show the outline of the handrail on the face of the newel post. Scale 1 : 1.

6. Fig. 6 shows the plan and elevation of a building with a flat roof and projecting eaves. To a scale of 1 : 50, draw the plan and make a perspective drawing of the building when the picture plane and the spectator (station point) are in the given positions. The height of the spectator (horizon line) is 1500 mm above the ground.

7. Fig. 7 shows the plan of a square vertical post and a supporting strut whose cross-section is a square of 150 mm side and which makes an angle of 50° with the horizontal plane. Draw the given plan, project an elevation on XY and develop the surfaces of the strut. Scale 1 : 10.



(FÍOR 2 - FÉACH THALL)
(FIG. 2 - SEE OVER)

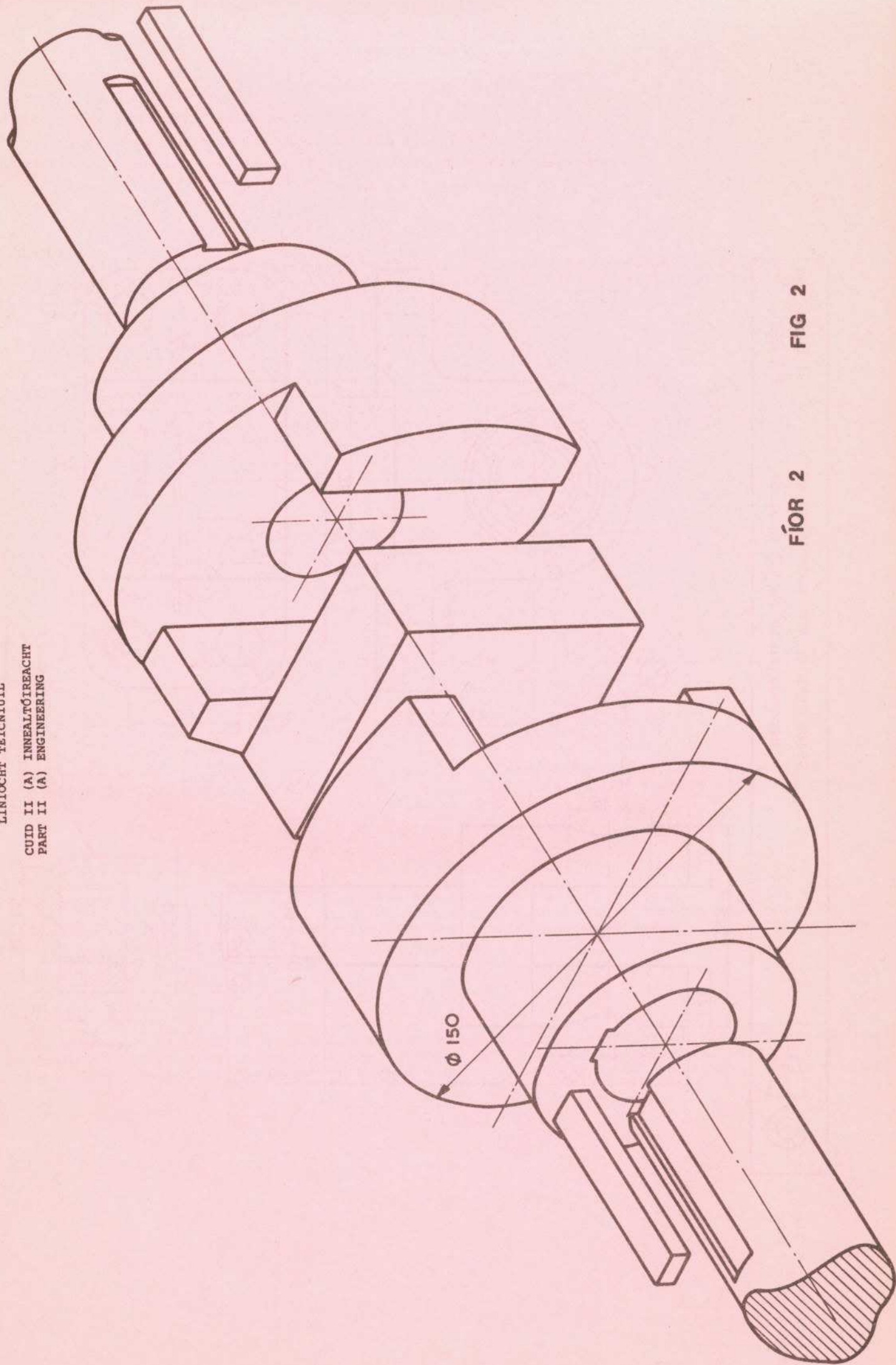
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FIG 1 all dimensions are in millimetres



M.118 (L 1)

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CUID II (A) INNEALTÓIREACHT
PART II (A) ENGINEERING



FÍOR 2

FIG 2

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