AN ROINN OIDEACHAIS M.115

INTERMEDIATE CERTIFICATE EXAMINATION, 1983

MECHANICAL DRAWING

WEDNESDAY, 15 JUNE - AFTERNOON, 2.00 to 5.00

400 marks

INSTRUCTIONS

(a) Five questions to be answered; one of these must be question No. 1, Section A. Two must be selected from Section B and two must be selected from Section C.
(b) All questions carry equal marks. A maximum of 12 marks will be awarded for draughtsmanship in respect of each question and a maximum of 20 marks will be awarded for neatness, arrangement and presentation of answer sheets.
(c) The number of the question must be distinctly marked by the side of each question.
(d) Work on one side of the paper only.
(e) Examination number must be distinctly marked on each sheet of paper used.
(f) All construction lines must be clearly shown.
(g) All measurements are in millimetres.

SECTION A

(This question must be attempted)

1. A shaped solid is shown in Fig. 1. Make a full-size drawing of this solid in orthographic projection showing:

(a) An elevation looking in the direction of arrow A.
(b) An end elevation looking in the direction of arrow B.
(c) A plan projected from (a).

First or Third Angle projection may be used.

SECTION B

(Two questions to be attempted from this section)

2. Fig. 2 shows the elevation and plan of an object. Draw the given views and project a new elevation looking in the direction of the arrow P.

3. In Fig. 3 is shown the elevation and plan of a container. The top of the container is open.
Draw the development of the surfaces of the container.

4. In Fig. 4 is shown a sketch of a shaped metal plate. An elevation of the plate is also shown. Draw the given elevation and project a plan of the plate.

5. The elevation and plan of an object are shown in Fig. 5.

(a) Draw a full-size isometric view of the object.

OR

(b) Using the isometric grid paper provided, draw a neat well-proportioned FREEHAND sketch of the object.

SECTION C

(Two questions to be attempted from this section)

6. Fig. 6 shows a metal plate in which there is a hole in the form of a regular pentagon.

(a) Draw the given shape showing clearly all construction lines.
(b) Draw another shape similar to Fig. 6 and in which the distance AB will be 145 mm.

7. (a) Draw the design shown in Fig. 7 to the given dimensions and showing all construction lines.

(b) Two parallel lines AB and CD are each 100 mm long and are 40 mm apart. Draw a circle which passes through the points A and B and which touches the line CD.

8. (a) A line 143 mm long represents a distance of 5.5 metres on a map. Construct a scale to this representation to read up to 6 metres.

(b) Using this scale draw the figure shown in Fig. 8 and construct a square equal in area to the figure.

9. (a) The design shown in Fig. 9 contains a semi-ellipse. Draw the design to the given dimensions.

(b) The distance between the focal points F_1 and F_2 of an ellipse is 110 mm and a given point on the curve is 95 mm from F_1 and 35 mm from F_2. Draw this ellipse.

SCRÚDÚ NA MEÁNTEISTIMÉIREACHTA AN ROINN OIDEACHAIS
LÍNÍOCHT MHEICNIÚIL 1983
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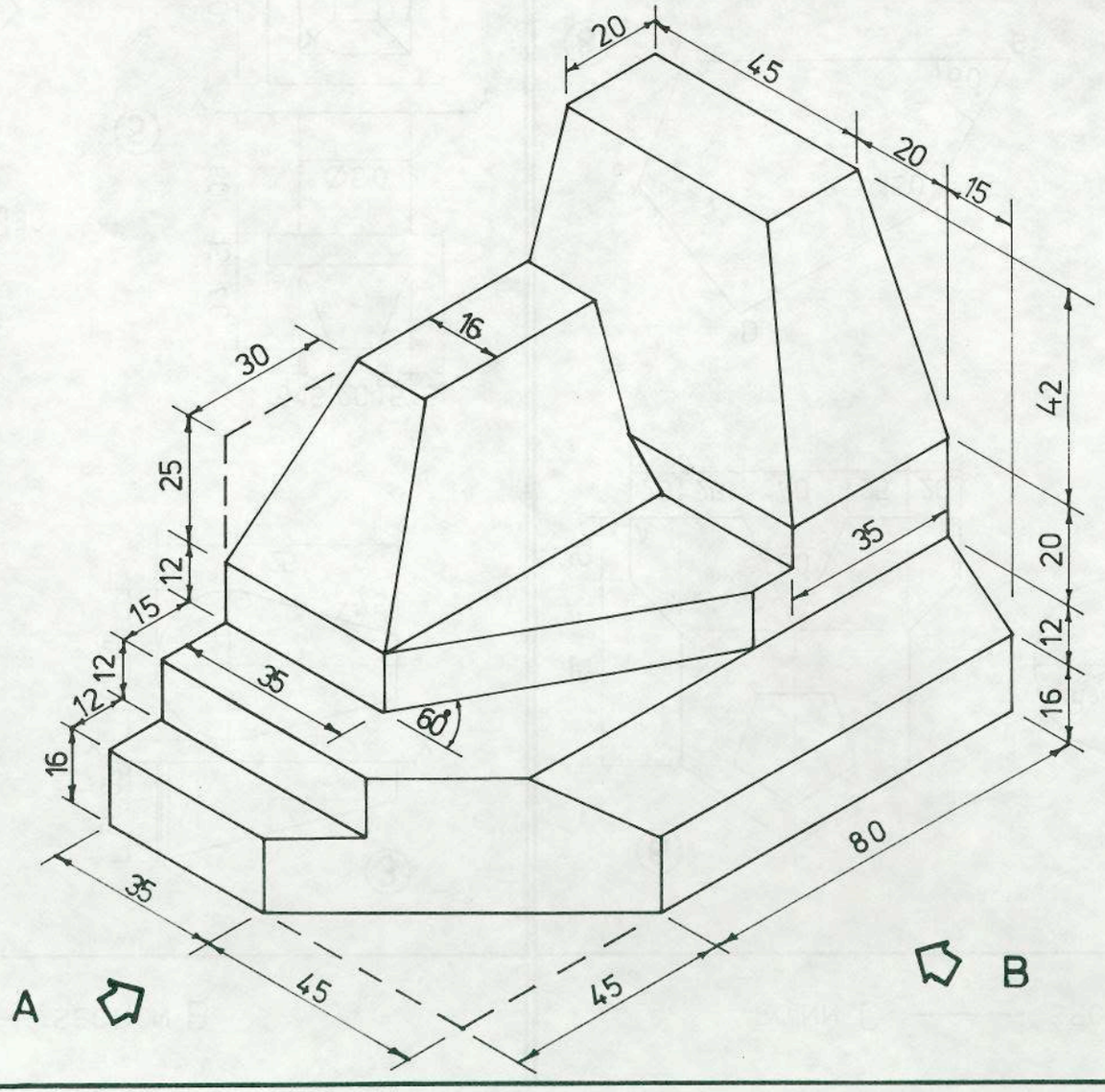
ROINN A

SECTION A



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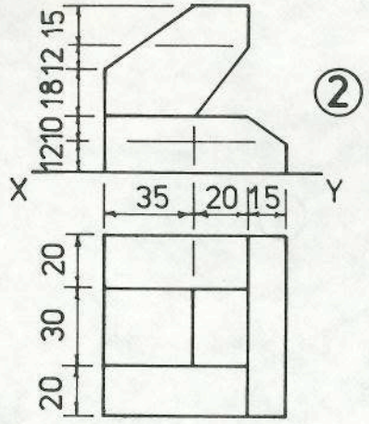
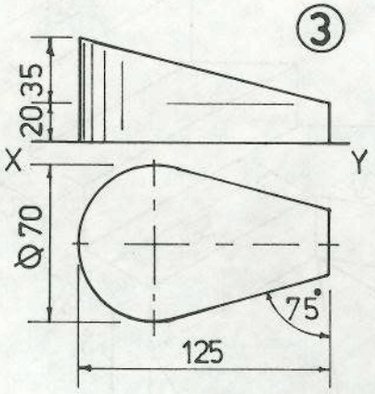
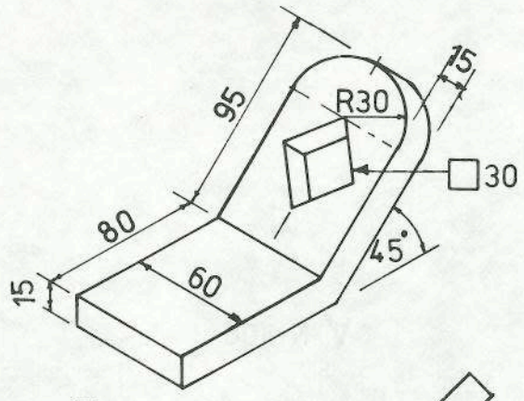
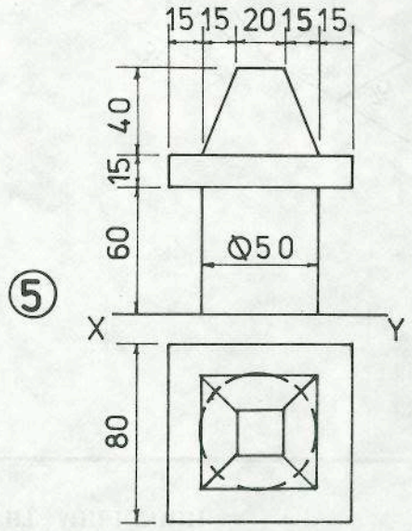
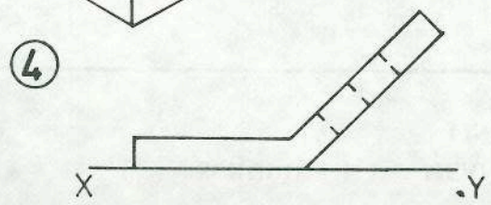
ROINN B ——— SECTION B



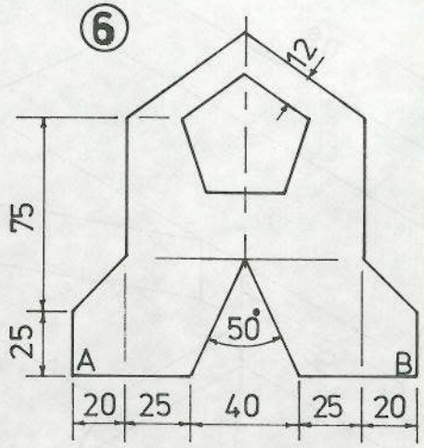


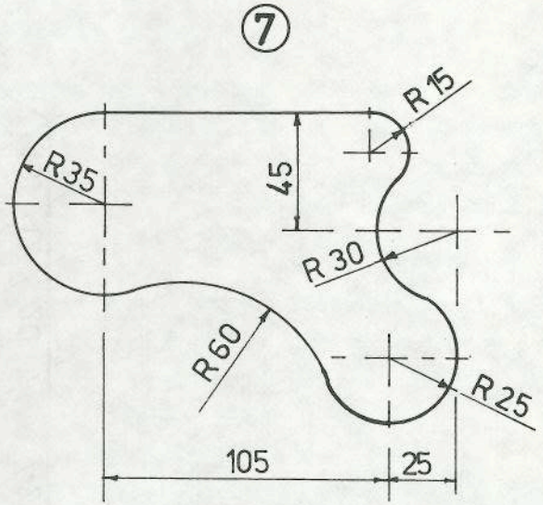


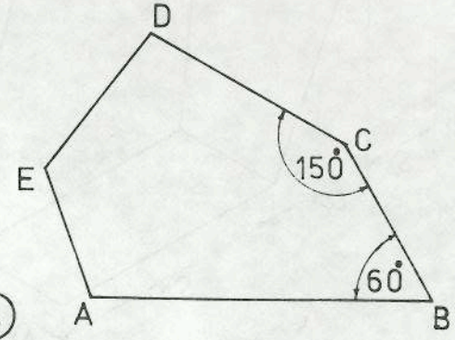




ROINN C ——— SECTION C







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AB	BC	CD	DE	EA
4·6m	2·4m	3·1m	2·3m	1·9 m