AN ROINN OIDEACHAIS

BRAINSE AN IARBHUNOIDEACHAIS

DAY VOCATIONAL CERTIFICATE EXAMINATIONS, 1971

MECHANICAL DRAWING

THURSDAY, 17th JUNE, 2 to 4.30 p.m.

INSTRUCTIONS

(*a*) Not more than **four** questions may be attempted; **two** of these must be selected from Section I and **two** from Section II.

(*b*) Question No. 1 is compulsory and candidates may choose either 1(A) or 1(B).

(*c*) The number of the question must be distinctly marked by the side of each answer.

(*d*) All questions carry equal marks; a maximum of five marks will be awarded for accuracy and neatness of arrangement in respect of each question.

(*e*) Work on one side of the paper only.

(*f*) Examination Number must be distinctly marked on each sheet of paper used.

IMPORTANT NOTE

Two sets of drawings are provided, one with dimensions in inches and the other with dimensions in millimetres. Candidates are free to work from either set. Candidates working in millimetres must print ALL DIMENSIONS IN MILLIMETRES on their answer sheets.

SECTION I

Answer question 1 (*A*) *or* 1 (*B*) *and one other question from this Section*

1. (A) The drawing represents a Woodwork Joint. Make a full-size dimensioned drawing of the assembled joint showing:—

(*a*) a front 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*).

Letter in the title of each view neatly.

Or

1. (B) The drawing represents a Metalwork Project. On the $\frac{1}{8}$ in. (3 mm) squared paper supplied draw free-hand and in good proportion the following:—

(*a*) a front 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*).

Show by properly drawn dimension lines the number of dimensions you would require to make this project. [It is not necessary to give actual measurements]

2. Draw, full size, in *Isometric Projection* the machine part shown in Fig. 2.
[A free-hand drawing will be accepted provided isometric grid paper is used]

3. The elevation of a funnel is shown in Fig. 3.
Draw, full size, the development of part A and part B.
[All construction work must be clearly shown]

4. Fig. 4 shows the elevation and plan of a cube. Draw, full size, these two views, and an auxiliary elevation on the new ground line X′Y′.
Index all the corners on each elevation.

SECTION II

Answer **two** *questions from this Section*

5. Fig. 5 represents the handle of a chisel. Draw the handle full size and show clearly all the construction lines necessary in locating the centres of the tangential arcs. Indicate the "points of contact" on your drawing.

6. Draw full size the figure shown in Fig. 6.
Reduce the side AB to $3\frac{1}{4}$ inches (82 mm) and re-draw the figure proportionately by radial projection.
Indicate the "points of contact" on your drawing.

7. Fig. 7 shows two circles inscribed in a quadrilateral. Draw the figure full size and show clearly all construction lines used. Indicate the "points of contact" on your drawing.

8. A semi-ellipse is shown in Fig. 8. The ratio of the length of the major axis to the length of the minor axis is 3 : 2.
Draw full-size the semi-ellipse and indicate the positions of the focal points F_1 and F_2.
The geometrical construction employed to determine the length of the minor axis must be clearly shown.

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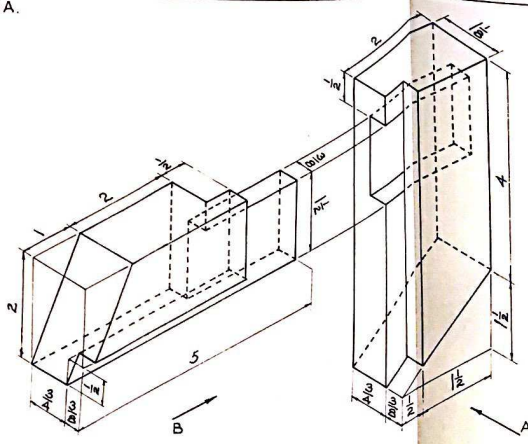
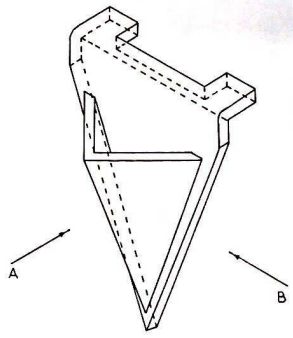
1971

ROINN 1 SECTION 1

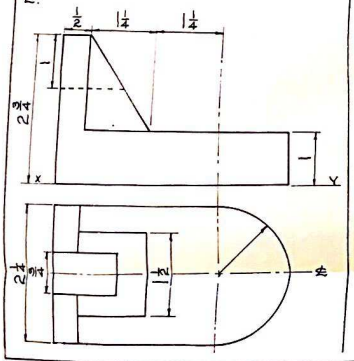
1A.



1B.



2.



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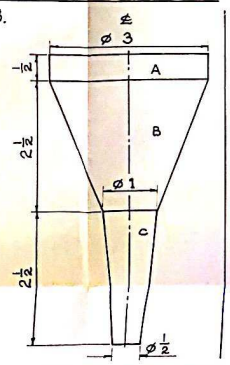

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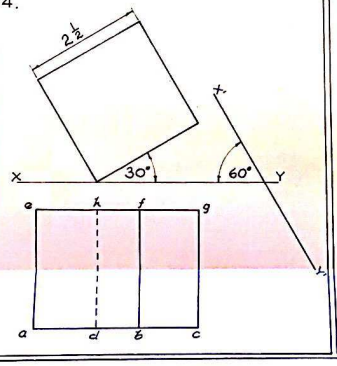
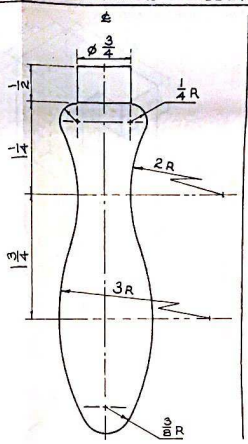
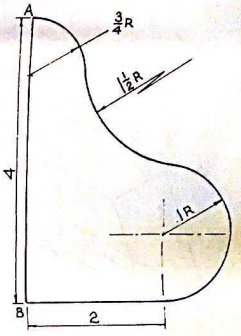


ROINN 2 SECTION 2

5.



6.



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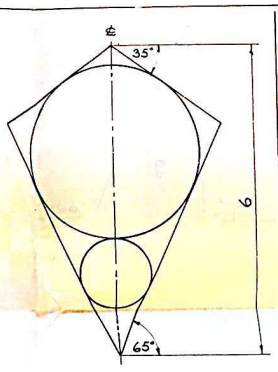
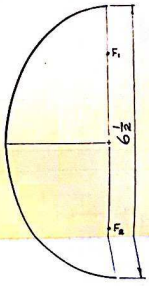


8.



ALL DIMENSIONS IN INCHES.
NA TOISÍ GO LÉIR IN ORLAÍ.

CANDIDATES MAY WORK FROM THE DRAWINGS IN MILLIMETRES ON THE REVERSE SIDE IF THEY PREFER.
IS CEADAITHE DIARRTHÓIAÍ AN OBAIR A DHÉANAMH Ó NA LÍNÍOCHTAÍ ATÁ I MILLIMÉADAIR AR AN TAOBH EILE MÁS MIAN LEO.