AN ROINN OIDEACHAIS.

AN BRAINSE GAIRM-OIDEACHAIS.

CERTIFICATE EXAMINATIONS
for
DAY VOCATIONAL COURSES, 1951.

MECHANICAL DRAWING.

Tuesday, 26th June—10–12.30 *p.m.*

INSTRUCTIONS.

(*a*) *Not more* than *four* questions may be attempted, *two* of these must be selected from *Section A* and two selected from *Section B*. Draw questions from Section A on one sheet of paper, and questions from Section B on a *separate* sheet.

(*b*) A maximum of *ten* marks will be awarded for accuracy and neatness of arrangement.

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

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

(*e*) Examination Number must be distinctly marked on *each* sheet of drawing paper.

SECTION A.

1. Fig. 1 shows a pictorial view of a "Solid Plug." Draw the following views of the plug, full size :—

(*a*) A front elevation looking in the direction of the arrow A.

(*b*) A side elevation looking in the direction of the arrow B.

(*c*) A plan projected from the front elevation.

Insert 4 of the main dimensions and letter in the title "SOLID PLUG" in capitals $\frac{1}{4}$" high.

2. Draw full size the complete development of the container Fig. 2. Neglect allowance for joints.

(Development of a cylinder.)

3. Make either an "Isometric" or an "Oblique" drawing of the book end shown in Orthographic projection at Fig. 3. (Full size).

4. Fig. 4 shows the front elevation of the top of a regular hexagonal post. Draw full size.

(*a*) Plan.

(*b*) Front Elevation.

Then draw

(*c*) Section end elevation cut by the vertical plane AA.

SECTION B.

5. Reproduce the moulding shown in Fig. 5. Height AA equals $1\frac{1}{2}''$. Draw by radial projection an outline similar to Fig. 5, having AA equal to $3\frac{1}{4}''$.

Measure and write down the actual size of the radius OR from the enlarged drawing.

(Use of radiating lines.)

6. Draw the quadrilateral ABCD, Fig. 6. Measure and write down the size of the angles BAD and BCD.

Construction lines to be shown.

(Angles in a semi-circle.)

7. Draw the sector AOB Fig 7, and inscribe the circle to touch the arc and both sides. Measure and write down the diameter of the circle.

All construction lines to be shown. No marks for guess work.

(Circle in triangle.)

8. (*a*) On a line $2\frac{3}{4}''$ long construct a regular pentagon and then draw the circumscribed circle.

(*b*) Write "in one sentence" why this pentagon is said to be regular.

(*c*) Write down the size of the internal angle formed by two sides of the pentagon.

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