

**AN ROINN OIDEACHAIS**

(Department of Education).

**BRAINSE AN MHEÁN-OIDEACHAIS**

(Secondary Education Branch).

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**INTERMEDIATE CERTIFICATE EXAMINATION, 1931.**

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**MECHANICAL DRAWING  
AND DESIGN.**

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*TUESDAY 16th JUNE.—AFTERNOON, 4 TO 6 P.M.*

**Note.**—The use of mathematical instruments, protractors, scales, T- and set-squares, and drawing-boards is allowed.

All construction lines must be clearly shown.

The number of the question must be distinctly marked by the side of each answer; both sides of the paper may be used.

Questions marked (\*) have accompanying diagrams.

Q. 1. At the top of your drawing paper, and  $1\frac{1}{4}$ " high draw in pencil, pen, or brush the word **SÍOS** in Irish letters, or the word **DOWN** in Roman letters.

[9]

\* Q. 2. A perspective drawing is given of a square slab surmounted by a truncated right square pyramid. The sides of the slab are 2" and its height  $\frac{1}{4}$ ". The base edges of the truncated pyramid are  $1\frac{1}{2}$ ", its upper edges 1" and its vertical height 1". Draw any plan and elevation.

[13]

\* Q. 3. Draw accurately with instruments the given figure, making the diameter of the circle 3 inches. All construction lines and points of contact must be clearly indicated.

[11]

\* Q. 4. Set out the construction lines necessary for the given pattern. The depth of the border to be three inches and other measurements in proportion. Complete sufficient to show how your construction works out.

[10]

\* Q. 5. The given figure consists of tangential arcs of circles, and tangents. Draw to the dimensions given. Construction and points of contact must be clearly shown. Scale  $\frac{3}{4}$ " to 1". An ordinary divided rule may be used.

[10]

Q. 6. Make a design to occupy a rectangle four inches by three inches.

You may select any style of ornament, and finish the design in two or three colours.

*Or*

Design a border, the repeat to be four inches by two inches.

The design must be Celtic or Floral in treatment. Complete one repeat in colour and show the main lines of adjacent repeat.

[22]

