# Pre-Junior Certificate Examination, 2013 

## Technical Graphics <br> Ordinary Level Section B <br> (280 marks)

## Time : $\mathbf{2}^{1 / 2}$ Hours

## Instructions

(a) Answer any four questions. All questions carry equal marks.
(b) The number of the question must be distinctly marked by the side of each answer.
(c) Work on one side of the answer paper only.
(d) Write your name, your school's name and your teacher's name on each sheet of paper used.

SECTION B. Answer any four questions. All questions carry equal marks.
1 The figure shows a design for a pencil sharpener. A 3D graphic of the pencil sharpener is also shown.

Draw:
(a) An elevation in the direction of arrow $\mathbf{A}$.
(b) An end elevation in the direction of arrow $\mathbf{B}$.
(c) Insert any four dimensions.


2 The figure shows the design of a logo for a canoe club.

The curve $\mathbf{A B C D}$ is an ellipse. AC is the major axis and is 180 mm long.

BD is the minor axis and is 100 mm long as shown.

EFG is an arc of a circle.

Draw the given logo showing clearly all construction lines.


3 The figure shows a design for a desk tidy.

Draw:
(a) An elevation in the direction of arrow $\mathbf{A}$.
(b) An end elevation projected from the elevation.
(c) The complete surface development of the desk tidy.


4


The figure shows the elevation and plan of the initials ABC.
The grid in elevation is made up of 15 mm squares and the thickness in plan is 10 mm .
Draw one of the following views:
(a) An isometric view of the letters
or
(b) An oblique view of the letters.

Note: The solution must be presented on standard drawing paper.

5


The given figure shows the design of a logo for a hat shop.
Draw the given logo and then locate the points $\mathbf{A}, \mathbf{A 1}, \mathbf{A 2}, \mathbf{A 3}, \mathbf{P}$ and the line $\mathbf{A - A 3}$ as shown.

Find the image of the given figure under the following transformations:
(a) From point A to A 1 by a translation;
(b) From point A1 to A2 by an axial symmetry in the line A-A3;
(c) From point A2 to A3 by a central symmetry in the point $\mathbf{P}$.

6 The figure shows the outline of a hammer.

Reproduce the given figure showing clearly how to find the centre points for all the circles.

Show all construction lines, tangents and points of contact.


