

Pre-Junior Certificate Examination, 2012

Technical Graphics

Higher Level

Section B

(280 marks)

Time : 3 Hours

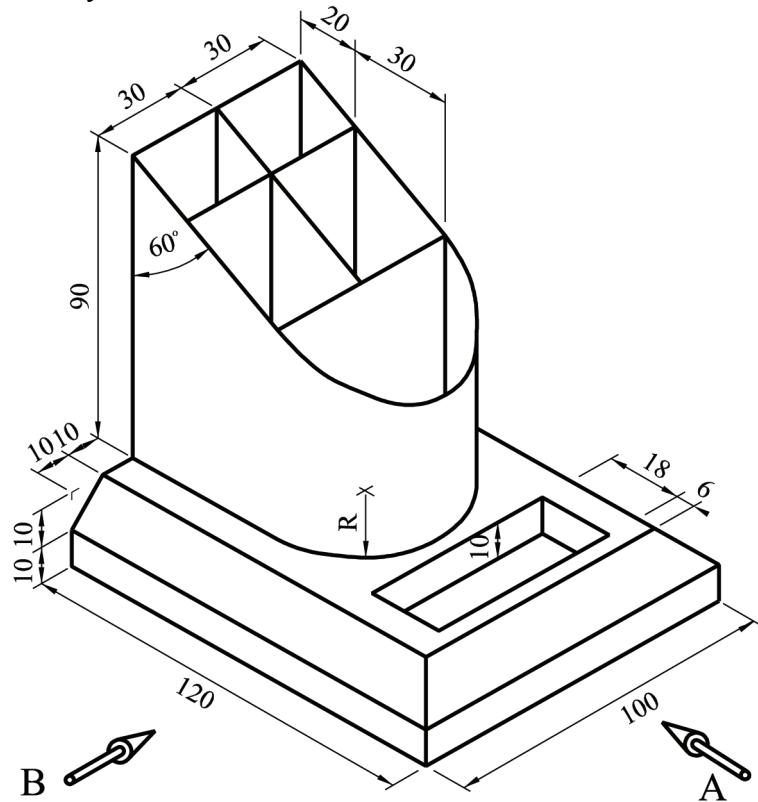
Instructions

- (a) Any four questions to be answered.*
- (b) All questions in this section carry equal marks.*
- (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) Write your name, your school's name and your teacher's name on each sheet of paper used.*

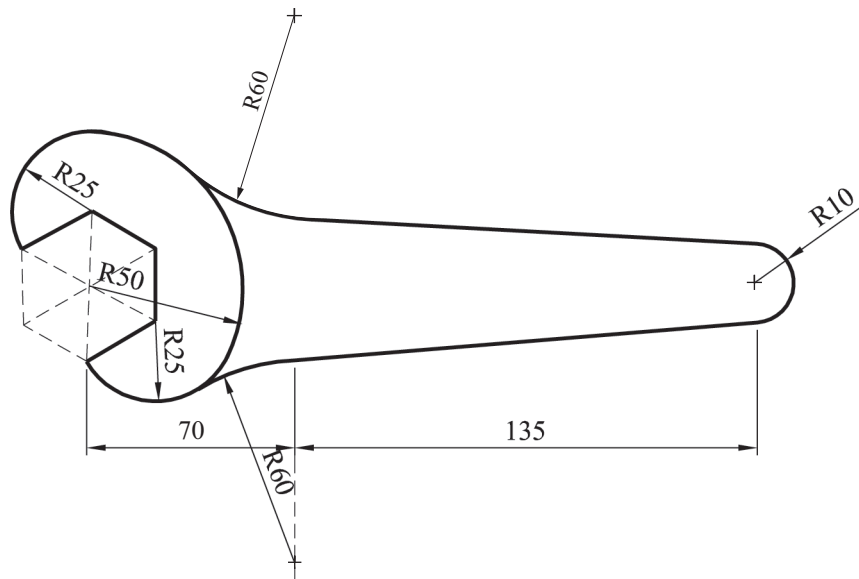
SECTION B. Answer **any four** questions. All questions carry equal marks.

1 A pictorial view of a desk tidy is shown.

- (a) Draw an elevation in the direction of arrow **A**.
- (b) Project a plan from the elevation.
- (c) Project an end view in the direction of arrow **B**.

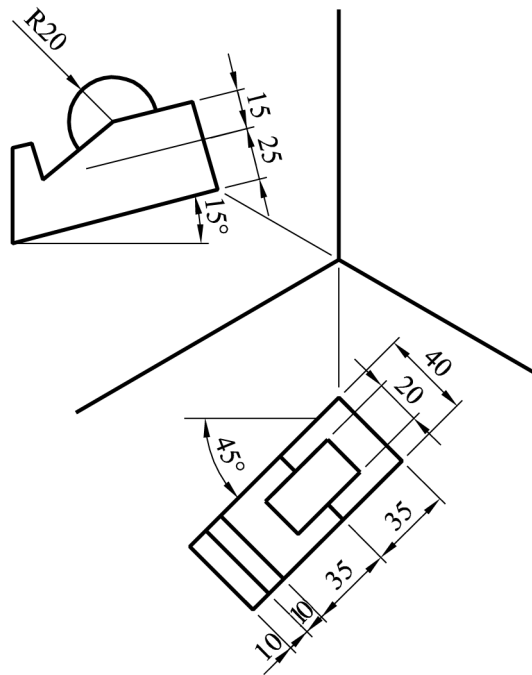


2 The figure shows the outline of a spanner. Draw the figure to the given dimensions showing all constructions clearly.



3 The axonometric axes required for the isometric projection of a tape dispenser are shown.

- (a)
- (i) Draw the axonometric axes as shown.
 - (ii) Draw the plan orientated at 45° as shown.
 - (iii) Draw the elevation orientated at 15° as shown.
 - (iv) Draw the completed axonometric projection of the tape dispenser.

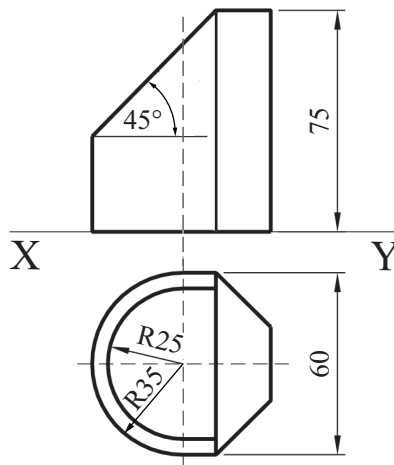


OR

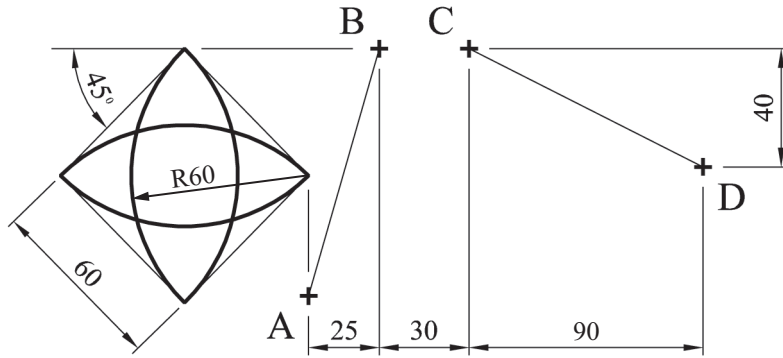
- (b) Draw the completed isometric projection of the tape dispenser using the isometric scale method.

4 The elevation and plan of a coal bunker are shown. Its outline in plan is based on a semi-octagon and a semi-circle.

- (a) Draw the elevation and plan as shown.
- (b) Draw the development of the vertical surfaces.
- (c) Find the true shape of the lid.



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The figure shows the logo of a flower shop.

The figure is subject to transformations in the following order:

- Axial symmetry in the line AB
- Central symmetry in the point B
- Translation equal to \vec{CD}
- Rotation clockwise about point A through an angle of 35° .

(a) Draw the given figure.

(b) Determine the image of the figure under **each** of these transformations.

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The figure shows the design of a logo for an archery club.

The curve **BCDG** is an ellipse with focal points **F** and **F₁** and a major axis of 120 mm.

AB and **DE** are tangents to the ellipse and are inclined as shown.

The curve **AHE** is a parabola with the vertex at **H**.

Determine the length of the minor axis.

Draw the given logo showing clearly all construction lines and points of contact.

