



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Junior Certificate Examination 2007

Technical Graphics

Higher Level

Section B

(280 Marks)

Monday 18 June

Morning 9:30 - 12:30

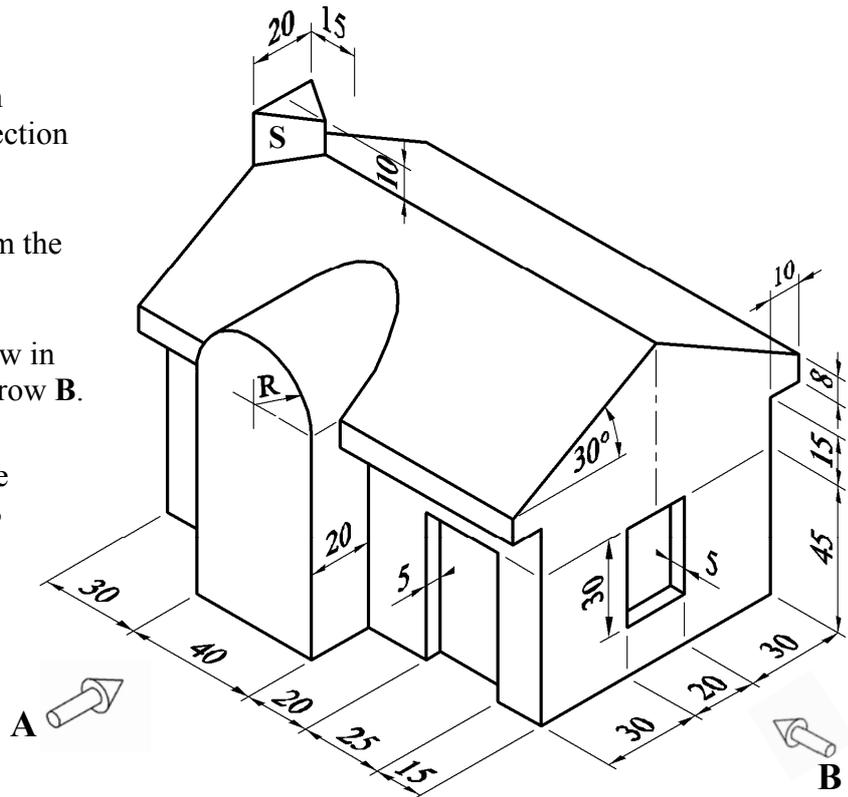
Instructions

- (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 examination number on each sheet of paper used.*

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

1. A pictorial view of a house is shown.

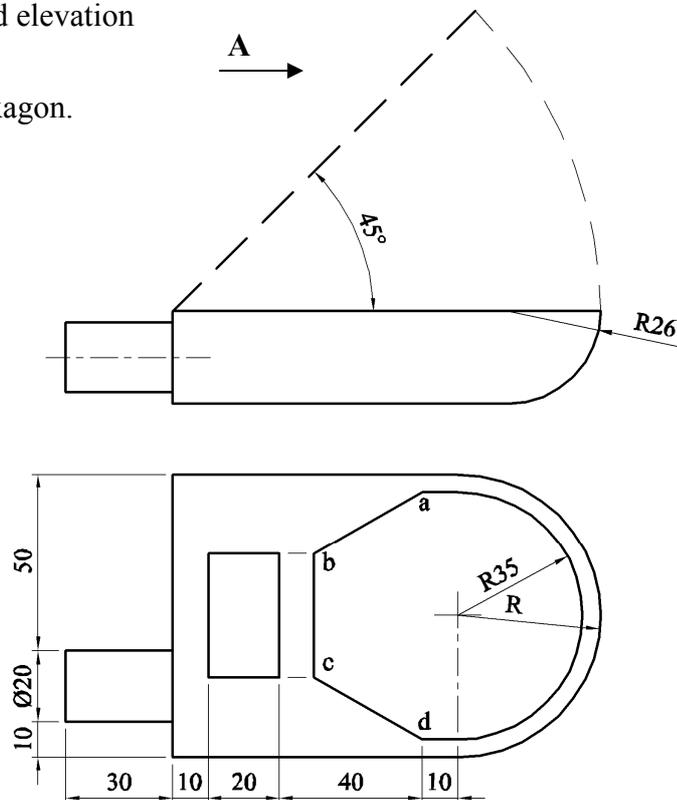
- (a) Draw an elevation looking in the direction of arrow A.
- (b) Project a plan from the elevation.
- (c) Project an end view in the direction of arrow B.
- (d) Determine the true shape of surface S of the chimney.



2. The figure shows the plan and elevation of a mobile phone.

The shape **abcd** is a semi-hexagon.

- (a) Draw the given plan and elevation.
- (b) Project an end elevation looking in the direction of arrow A to show the cover in the open position, as indicated by the broken line in elevation.

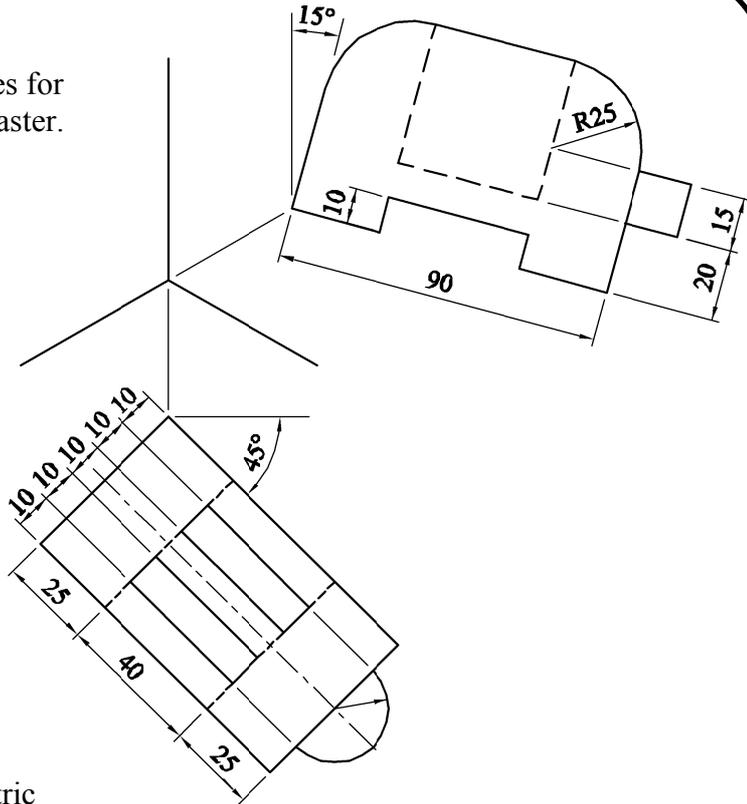


3.

Shown are the axonometric axes for the isometric projection of a toaster.

(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 toaster.



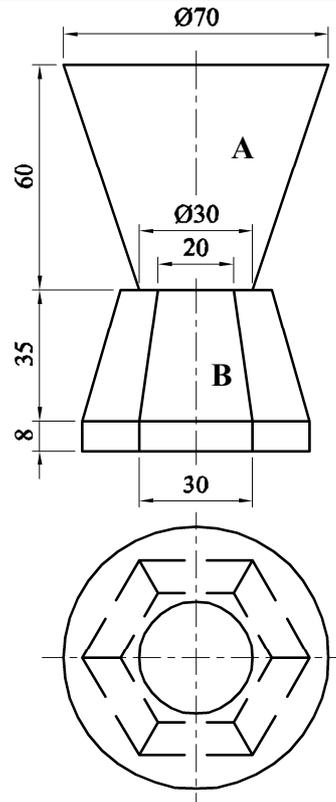
OR

- (b)** Draw the completed isometric projection of the toaster using the isometric scale method.

4.

The figure shows the elevation and plan of a blender for fruit drinks with the lid removed. A pictorial view is also shown.

- (a)** Draw the given plan and elevation.
- (b)** Draw the development of the surface A.
- (c)** Draw the development of the surface B.



5. The figure shows the head of a bird for a cartoon.

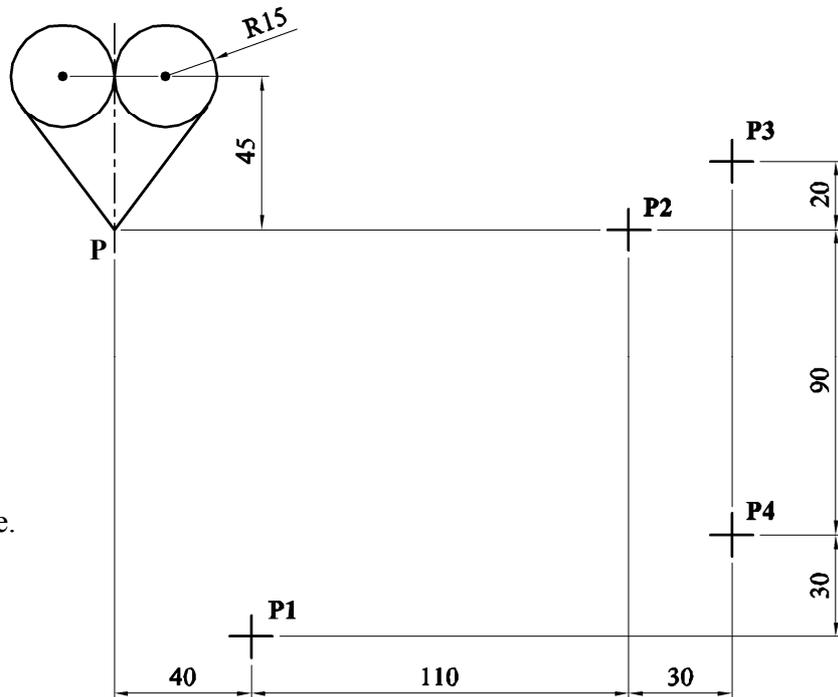
The figure is subject to transformations in the following order:

- Translation;
- Axial Symmetry;
- Central Symmetry;
- Rotation clockwise through 120° .

P1, P2, P3 and **P4** show the position of point **P** under each of these transformations.

(a) Draw the given figure.

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



6. The figure shows the design of a toy aeroplane.

The curve **ABC** is a parabola with the vertex at **B**.

The curve **AED** is elliptical with focal points at **F** and **F₁**.

The line **CD** is a tangent to the ellipse.

The five rectangular windows are the same size and are equally spaced.

Draw the given design.

Show all constructions clearly.

