AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA **S61BL**

11086

B JUNIOR CERTIFICATE EXAMINATION, 2000

TECHNICAL GRAPHICS — HIGHER LEVEL

THURSDAY 15 JUNE — MORNING, 9.30 - 12.30

SECTION B — 280 MARKS

INSTRUCTIONS FOR SECTION B

(a) Any four questions to be answered.

(b) All questions in this Section carry equal marks.

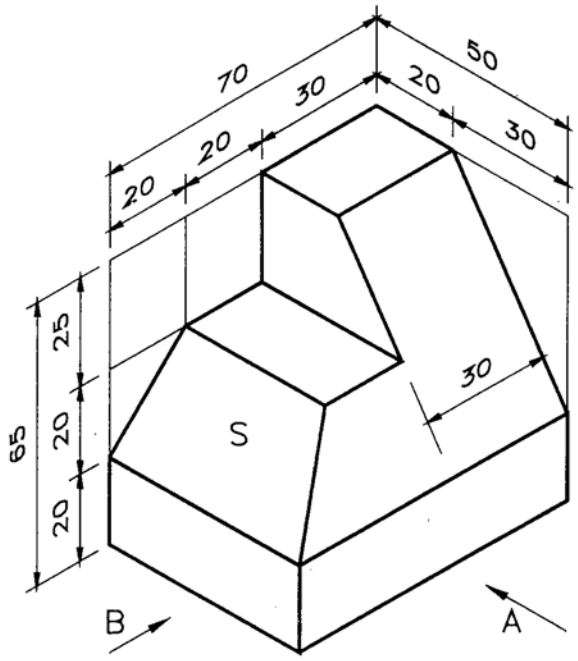
(c) The number of the question must be distinctly marked by the side of each answer.

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

(e) Examination number must be distinctly marked on each sheet of paper used.

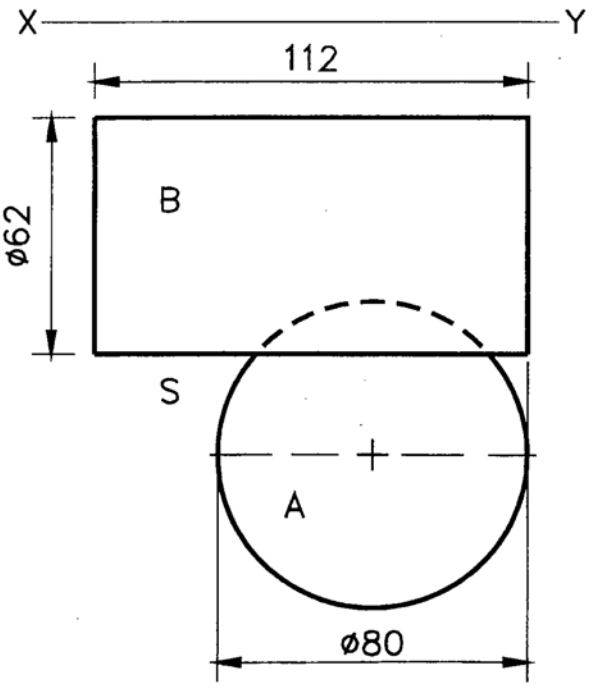
1. A pictorial view of a structure is shown.

(a) Draw an elevation looking in the direction of the arrow A.
(b) Draw an end view looking in the direction of the arrow B.
(c) Draw a plan projected from (a) above.
(d) Draw an auxiliary plan of the surface S which will show its true shape.



2. Shown is the plan of a cone A, base diameter 80 and altitude 65, and a cylinder B, diameter 62 and length 112. Both solids rest on the horizontal plane and are in contact.

(a) Draw the elevation and plan of the cone and cylinder in the given position.
(b) A sphere of diameter 32 rests on the horizontal plane in the position S so that it is in contact with both cone and cylinder. Draw the sphere in plan and elevation.
(c) Show all points of contact in elevation and plan.



3. The figure shows an incomplete isometric projection of a wire model using the axonometric axes method. Both side elevations are also shown in their required positions.

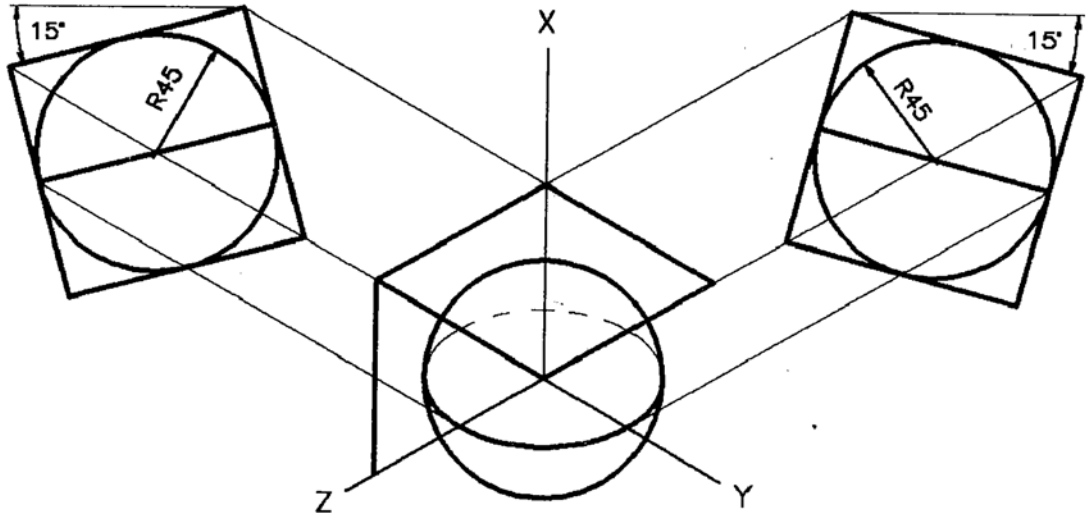
(a) (i) Draw the axes X,Y, and Z

(ii) Draw the side elevations orientated at 15° as shown.

(iii) Draw the completed isometric projection.

OR

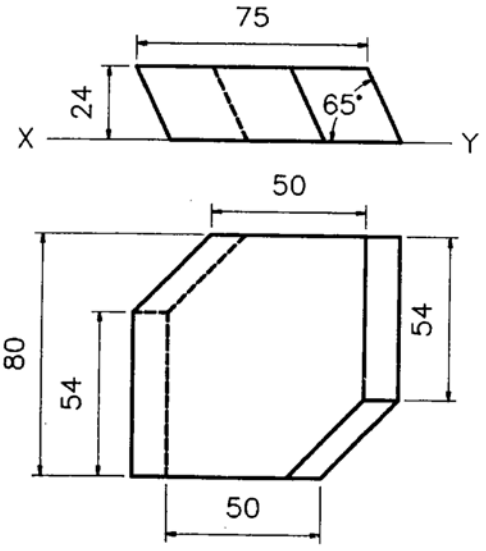
(b) Draw the completed isometric projection using isometric scale.



4. The elevation and plan of a container are shown.

(a) Draw the given views.

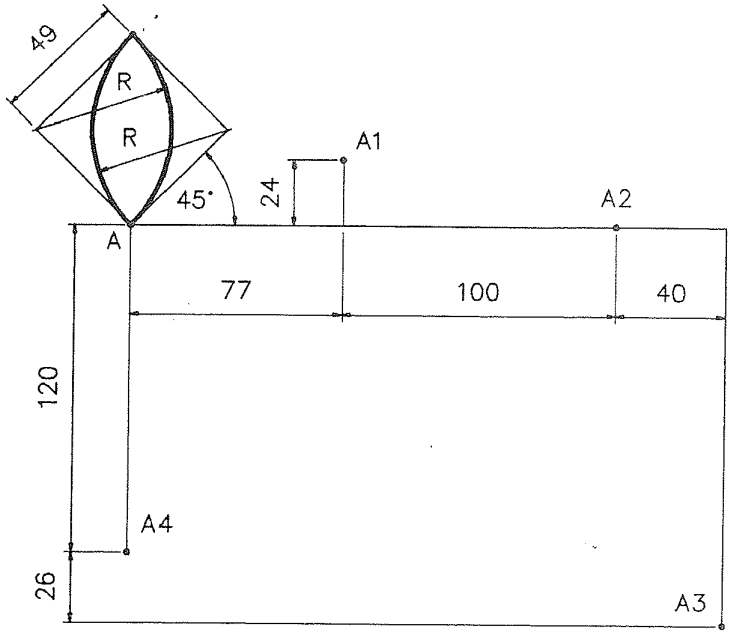
(b) Draw the complete surface development.



5. The figure shown is subjected to transformations in the following order:-

(i) Central symmetry in a point.
(ii) Axial symmetry.
(iii) Rotation clockwise through 120°.
(iv) Translation.

A1, A2, A3 and A4 shows the position of the vertex A under these transformations. Draw the given figure and determine the image figures in each of the transformations.



6. The figure represents the outline of a radar station. The curve ABC is a semi-ellipse with minor-axis 80. The curve DEF is based on a parabola with a vertex at E. Draw the outline of the station showing all constructions clearly.