

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

LEAVING CERTIFICATE EXAMINATION, 2001

**TECHNICAL DRAWING – ORDINARY LEVEL – PAPER II (B)**  
**BUILDING APPLICATIONS**

FRIDAY, 15 JUNE — AFTERNOON 2.00 p.m. to 5.00 p.m.

(200 MARKS)

**INSTRUCTIONS**

- (a) Answer **four** questions.
- (b) All questions carry equal marks.
- (c) Construction lines must be shown on all solutions.
- (d) Write the number of the question, distinctly, on the answer paper.
- (e) First or third angle projection may be used.
- (f) All dimensions are given in metres or millimetres.

1. Fig. 1 shows the outline plan and elevation of a building. Draw the given plan and make a perspective drawing of the building when the position of the spectator is 9 m from the corner A, the picture plane is touching corner A and the horizon line is 8 m above the ground line.

Scale 1 : 100

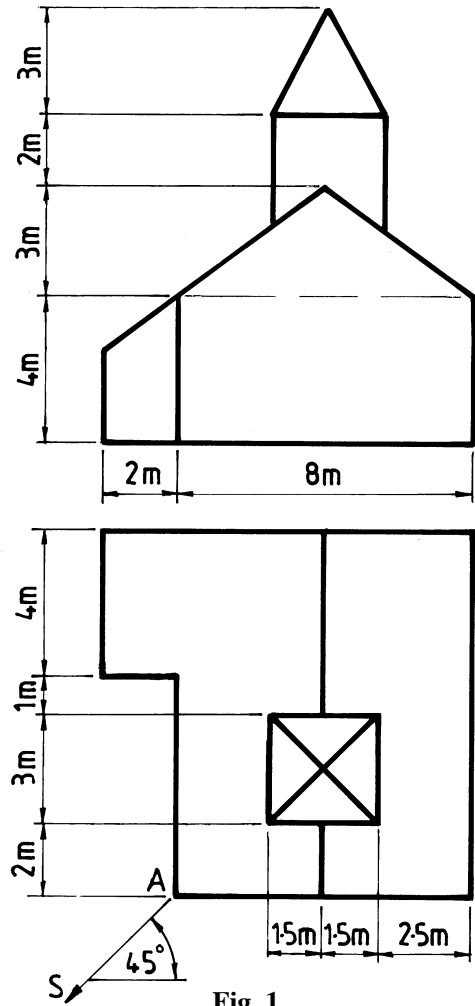


Fig. 1

2. Fig. 2 shows the outline plan and elevation of a roof. Surface B has a pitch of  $40^\circ$ , surface C has a pitch of  $30^\circ$ , and surface D has a pitch of  $35^\circ$ .

- Draw the given plan and elevation of the roof.
- Determine the pitch of surface A.
- Develop the surface D.
- Find the dihedral angle between the surfaces C and D.

Scale 1 : 100

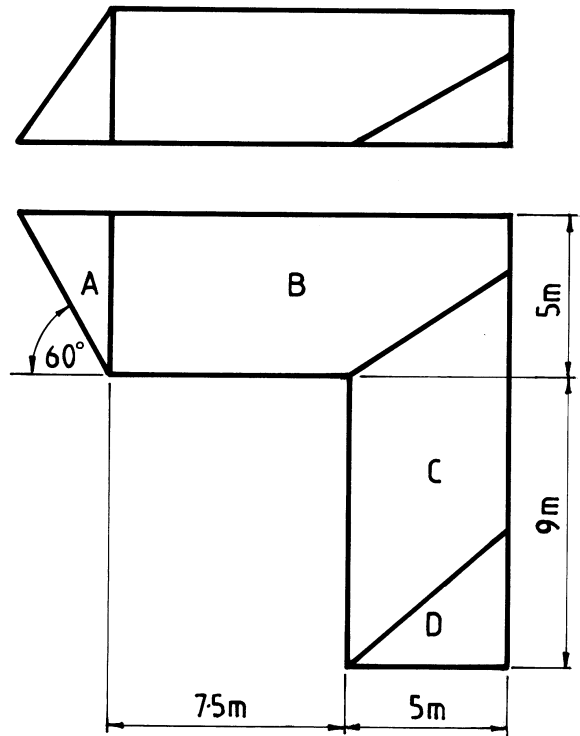


Fig. 2

3. Fig. 3 shows the plan and elevation of a structure. A pictorial view of the structure is also shown. Draw the given plan and elevation and determine the shadows cast in plan when the direction of light is as shown.

Scale 1 : 200

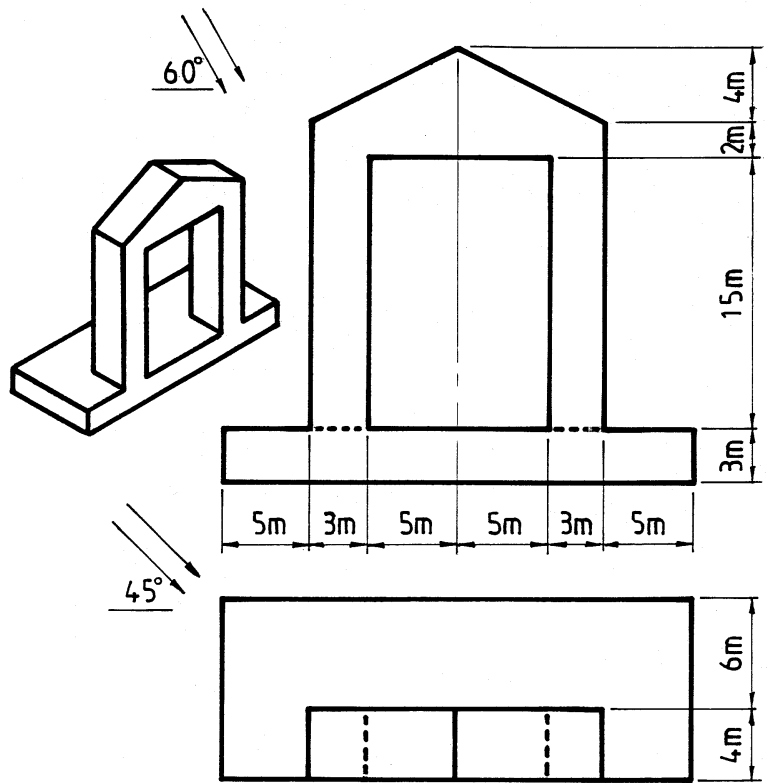


Fig. 3

4. Fig. 4 shows the outline plan of a hyperbolic paraboloid roof surface ABCD. The roof perimeter is a square in plan. The corners B and D are at ground level, corner A is 7 m above ground level, and corner C is 11 m above ground level.

- Draw the given plan of the roof and project an elevation.
- Determine the curvature of the roof along a line joining B and D.
- Draw a new elevation of the roof which will show the true length of the edge AB.

Scale 1 : 100

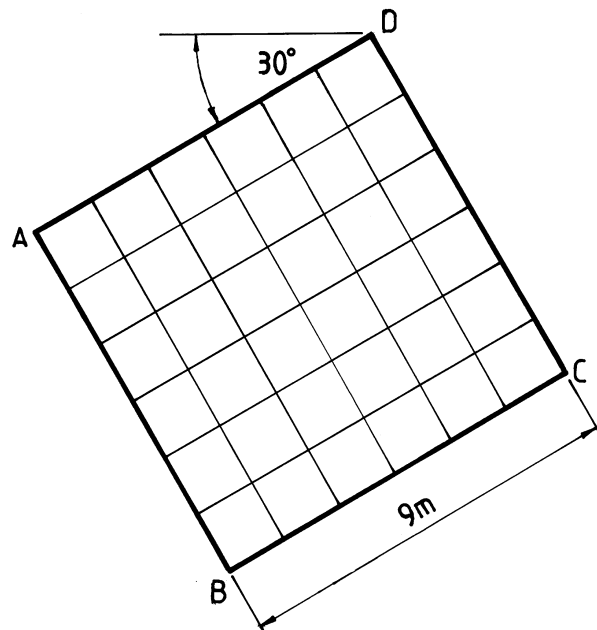


Fig. 4

5. Fig. 5 shows the plan, elevation and end elevation of a building. Draw an isometric view of the building having corner X as its lowest point.

Scale 1 : 100

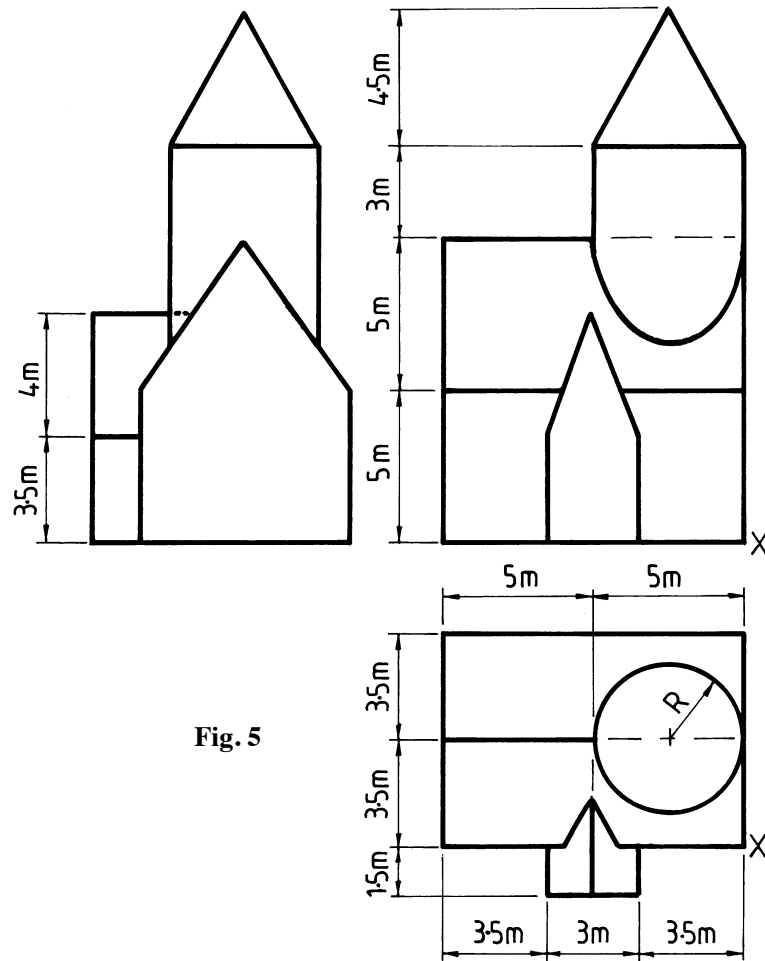


Fig. 5

6. Fig. 6 shows the outline plan and elevation of a structure. It is in the form of a hyperboloid of revolution surmounted by a hemispherical dome. The joint lines are also shown.

Draw the given plan and elevation.

Scale 1 : 200

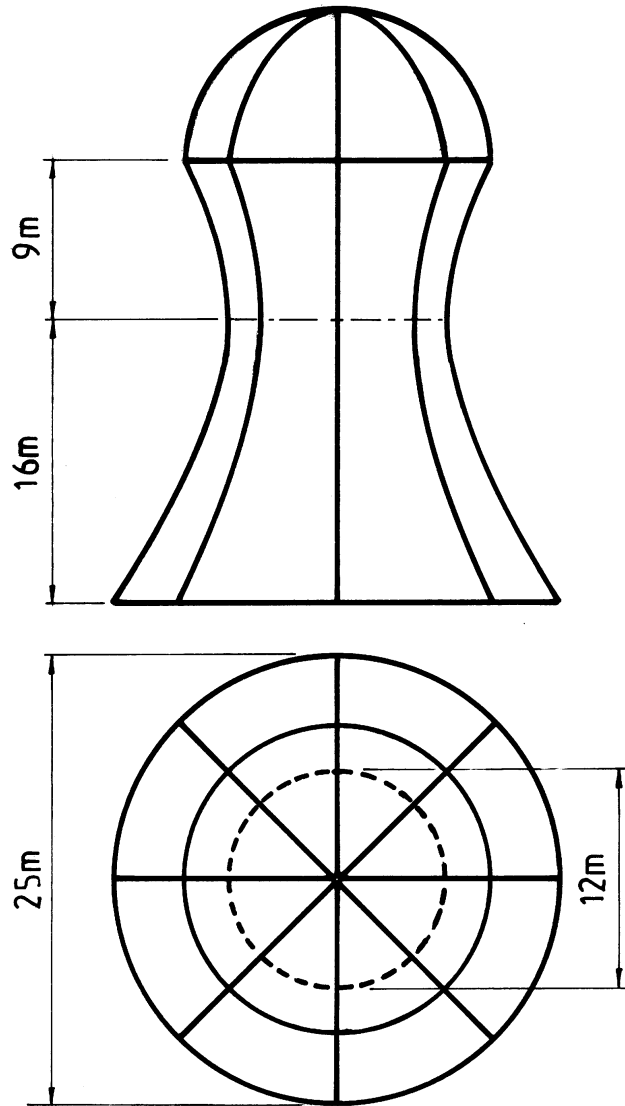


Fig. 6

7. The accompanying drawing shows ground contours at ten-metre vertical intervals on a map.
- On the drawing supplied, draw a vertical section (profile) on the line DE.
  - A, B and C are outcrop points on the surface of a stratum of ore. Determine the dip and strike of the stratum.
  - Draw the complete outline of the outcrop.

Serúduimhir:  
Examination Number:

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