AN ROINN OIDEACHAIS
LEAVING CERTIFICATE EXAMINATION, 1995

TECHNICAL DRAWING - ORDINARY LEVEL - PAPER II (B)
BUILDING APPLICATIONS

MONDAY, 19 JUNE - MORNING 9.30 to 12.30

(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 measurements are given in metres or millimetres.

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1. Fig. 1 shows the outline plan and elevation of a structure.
Draw the given plan and make a perspective drawing of the structure when the position of the spectator is 9 m from the corner A, the picture plane touching the corner A and the horizon line 6 m above the ground line.
Scale 1 : 100

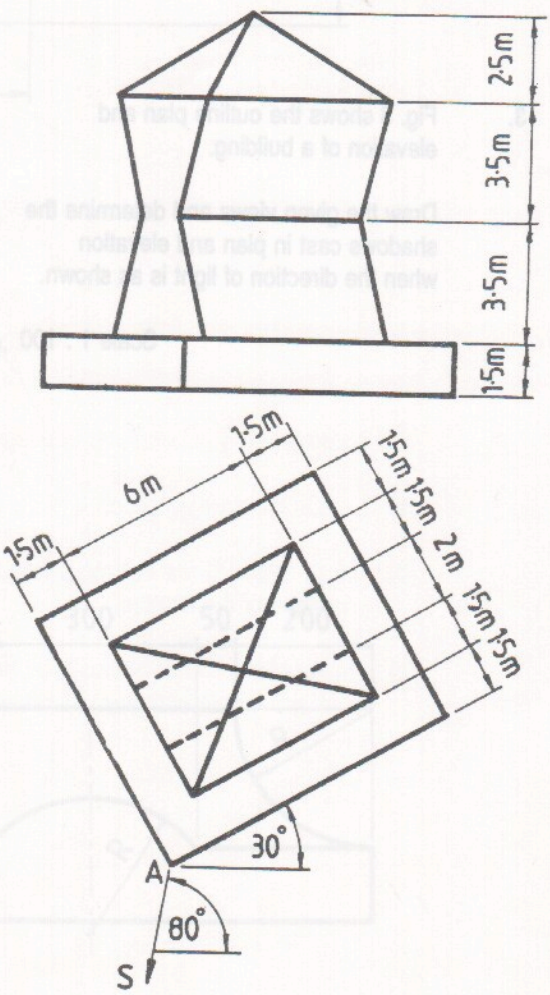

FIG.1

2. Fig. 2 shows the outline plan of a roof. Surfaces A and C have a pitch of 40° and surfaces B and D have a pitch of 35°.

(a) Draw the plan and project the elevation of the roof.

(b) Develop the surfaces B and C.

(c) Find the dihedral angle between the surfaces A and D.

Scale 1 : 100

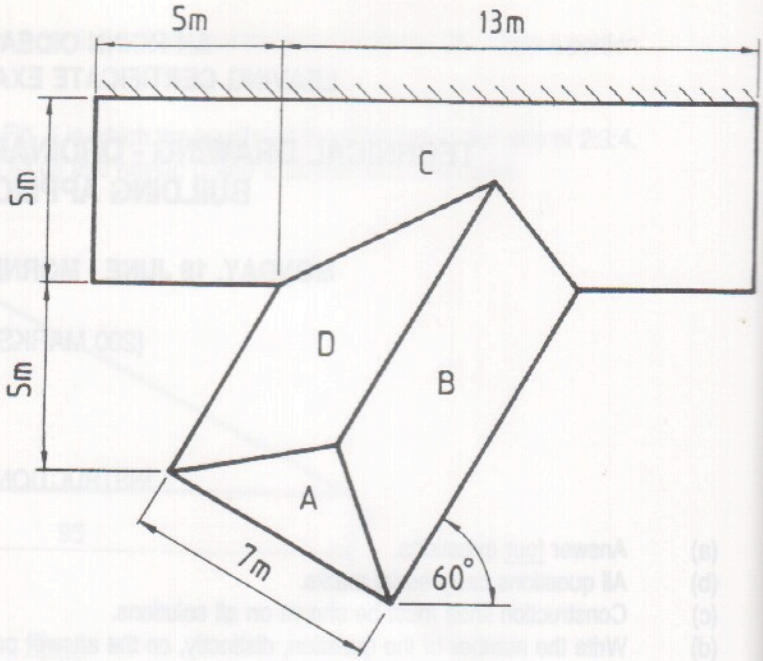

FIG.2

3. Fig. 3 shows the outline plan and elevation of a building.

Draw the given views and determine the shadows cast in plan and elevation when the direction of light is as shown.

Scale 1 : 100

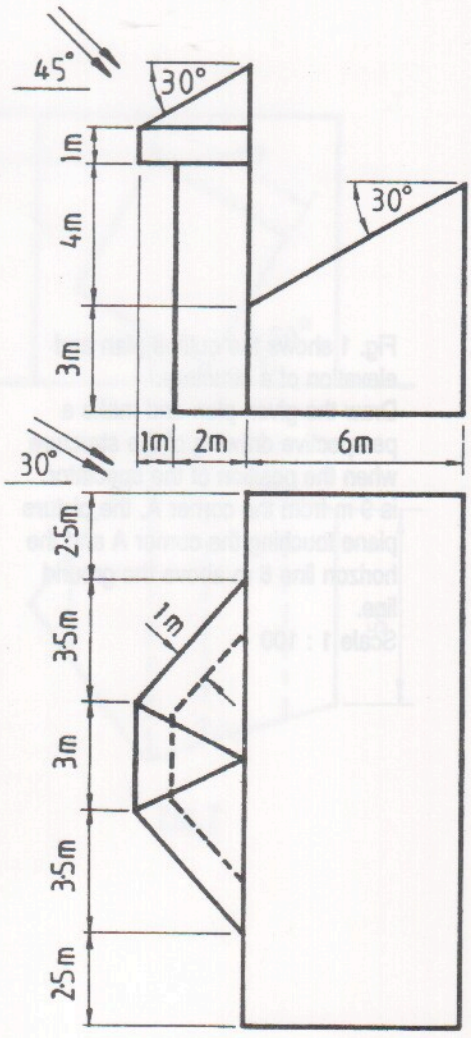

FIG.3

4. Fig. 4 shows the outline plan of two similar adjoining hyperbolic paraboloid roof surfaces ABOD and BCDO. The corners A and C are 4 m above ground level, corners B and D are 7 m above ground level, and corner O is 24 m above ground level.

(a) Draw the plan of the roof and project the elevation.

(b) Show the true shape of the sections R - R and S - S through the roof surfaces.

Scale 1 : 200

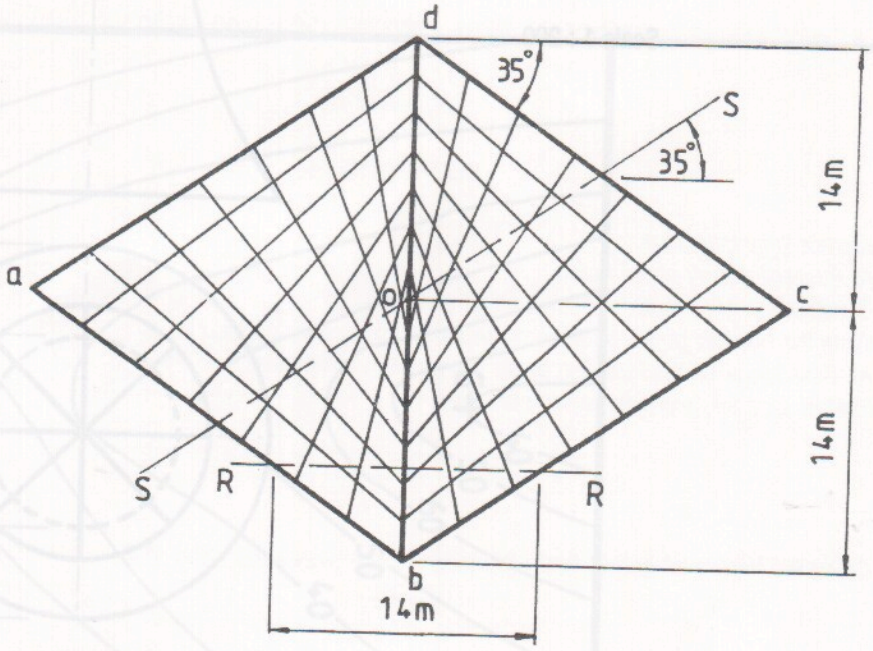

FIG.4

5. Fig. 5 shows the elevation and end elevation of a building stone.

(a) Draw the given views.

(b) Draw an isometric view of the stone.

Scale 1 : 5

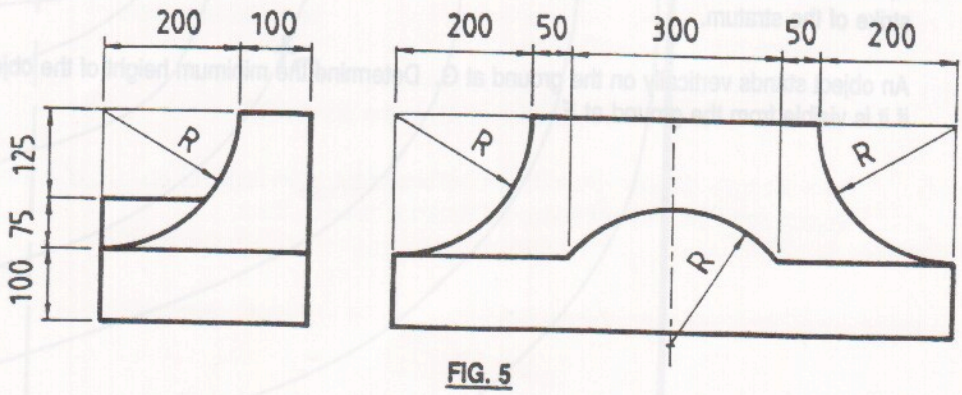

FIG. 5

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

Draw the given plan and elevation.

Scale 1 : 200

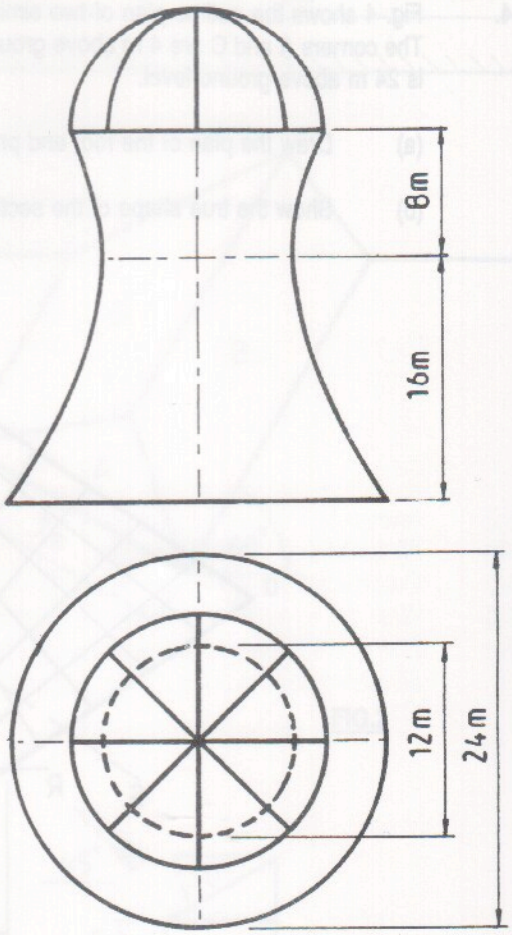

FIG.6

7. The accompanying drawing shows ground contours at ten-metre vertical intervals on a map.

(a) On the drawing supplied, draw a vertical section (profile) on the line DE.

(b) A, B and C are outcrop points on the surface of a stratum of ore. Determine the dip and strike of the stratum.

(c) An object stands vertically on the ground at G. Determine the minimum height of the object if it is visible from the ground at F.

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Examination Number

AN ROINN OIDEACHAIS M.83(L)S

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