AN ROINN OIDEACHAIS

LEAVING CERTIFICATE EXAMINATION, 1992

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

MONDAY 22 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 monument. Draw the given plan and make a perspective drawing of the monument when the position of the spectator is 1.9m from the corner A, the picture plane touching the corner A and the horizon line 1m above the ground line.

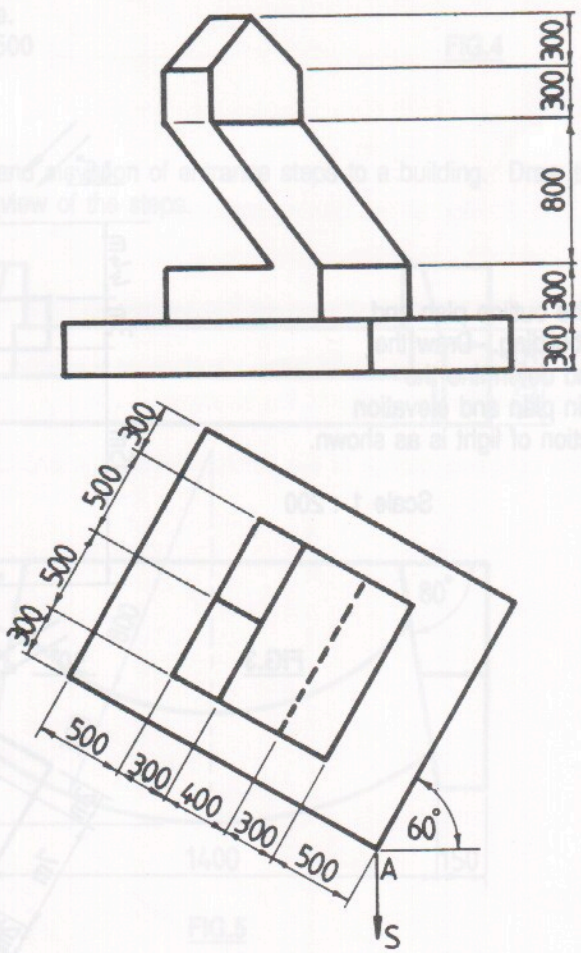

FIG.1

2. Fig. 2 shows the outline plan of a roof. Surface A has a pitch of 30° and surfaces B and D have a pitch of 40°

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

(b) Determine the pitch of surface C.

(c) Develop the surface B.

(d) Find the dihedral angle between the surfaces C and D.

Scale 1 : 100

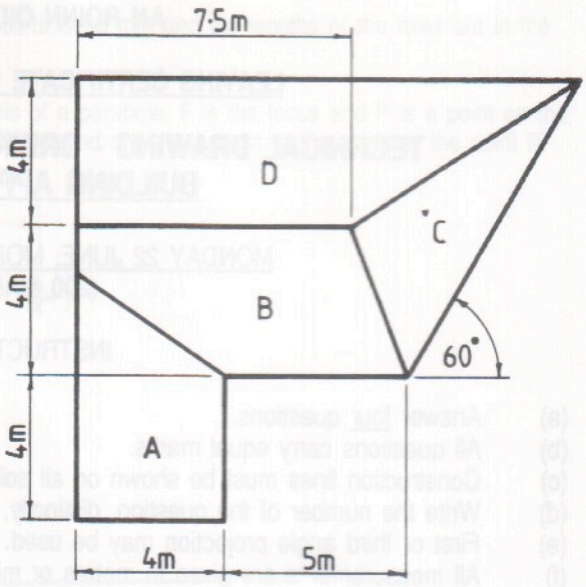

FIG.2

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 : 200

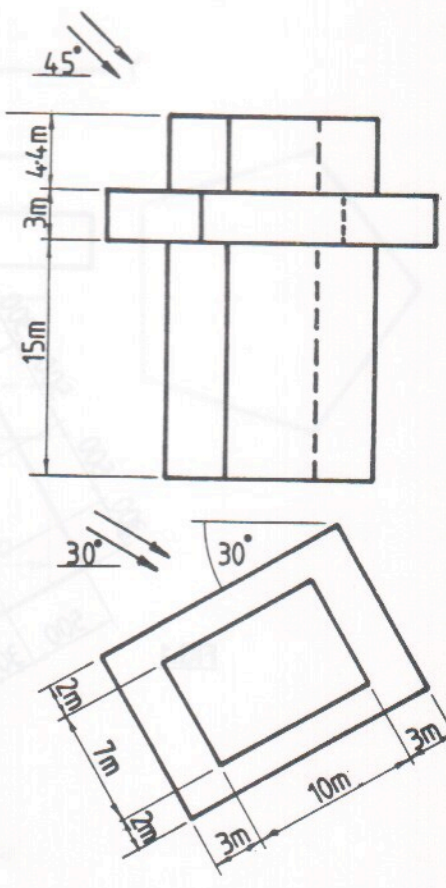

FIG.3

4. Fig. 4 shows the outline plan of a hyperbolic paraboloid roof surface. The corners A and C are 40m above ground level and the corners B and D are 5m above ground level.

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

(b) Draw an elevation of the roof in which the true length of the edge AD will be seen.

(c) Determine the true shape of the section R - R through the roof surface.
Scale 1 : 500

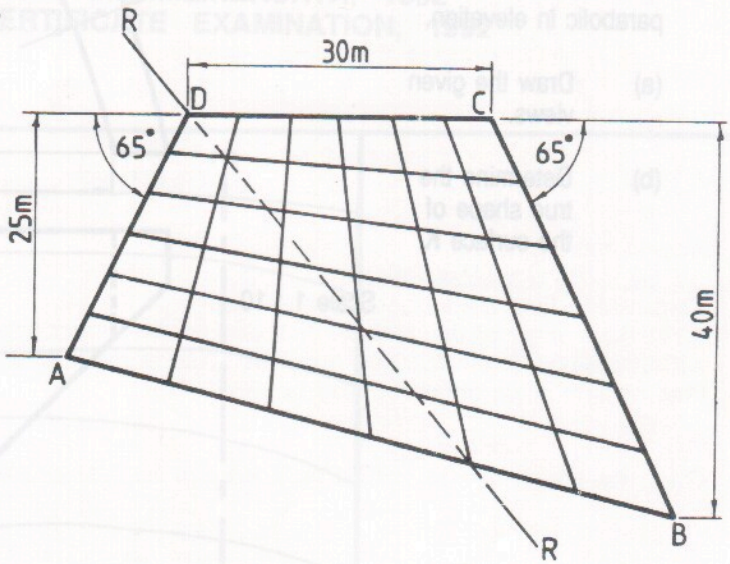

FIG.4

5. Fig. 5 shows the plan and elevation of entrance steps to a building. Draw the given views and draw an isometric view of the steps.

Scale 1 : 10

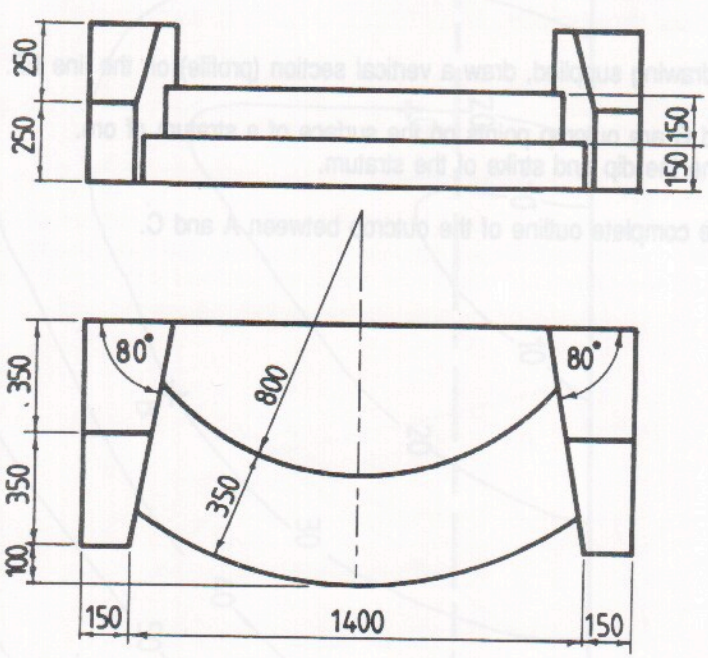

FIG.5

6. Fig. 6 shows the elevation and plan of a concrete arch for a window. The arch is parabolic in elevation.

(a) Draw the given views.

(b) Determine the true shape of the surface K.

Scale 1 : 10

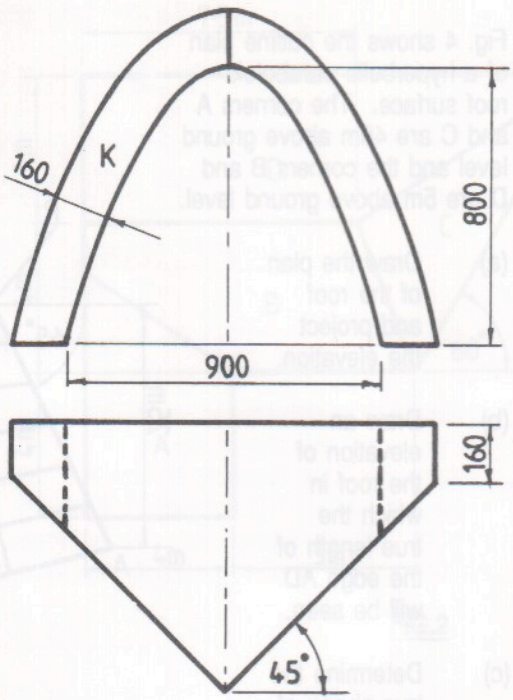

FIG.6

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 EF.

(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) Draw the complete outline of the outcrop between A and C.

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Examination Number

AN ROINN OIDEACHAIS **M.83(L)**

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