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

FRIDAY, 18 JUNE - AFTERNOON 2.00 - 5.00 p.m.

(200 MARKS)

INSTRUCTIONS

(a)   Answer <u>four</u> 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 building. Draw the given plan and make a perspective drawing of the building when the position of the spectator is 17 m from the corner A, the picture plane touching the corner A, and the horizon line 16 m above the ground line.
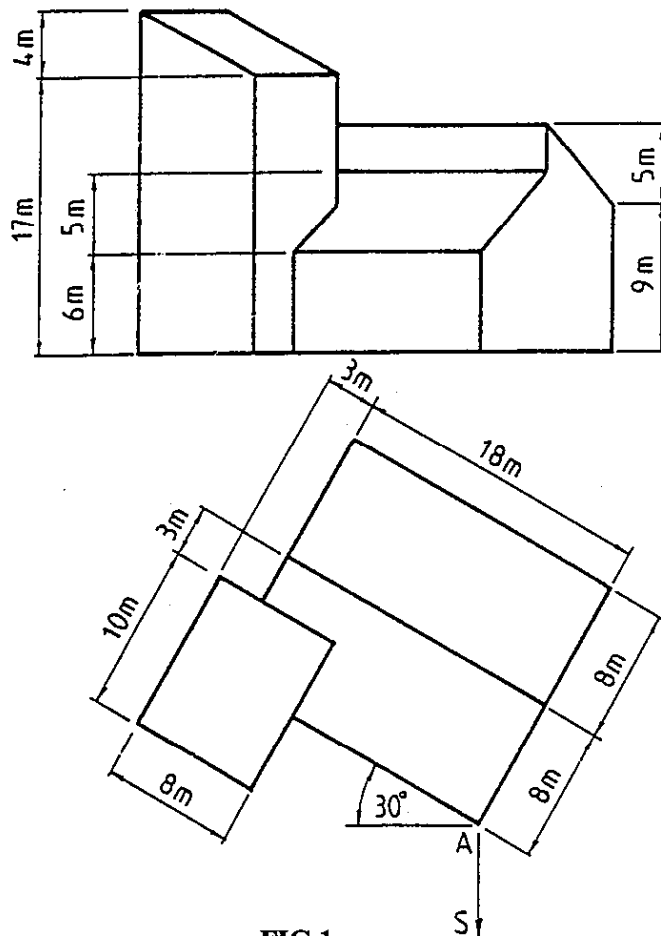
Scale 1 : 200

FIG.1

OVER →

2. Fig. 2 shows the outline plan and elevation of a roof. Surface A has a pitch of 40°, surface B has a pitch of 30° and surface C has a pitch of 35°.

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

    (b) Develop the roof surface C.

    (c) Find the dihedral angle between the surfaces A and B.
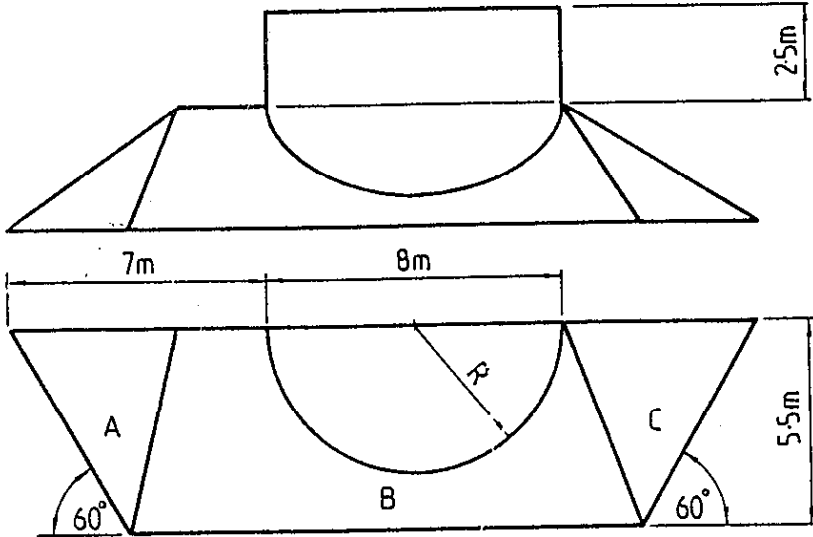
Scale 1 : 100

FIG.2

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

Draw the given plan and elevation and determine the shadows cast in plan when the direction of light is as shown.
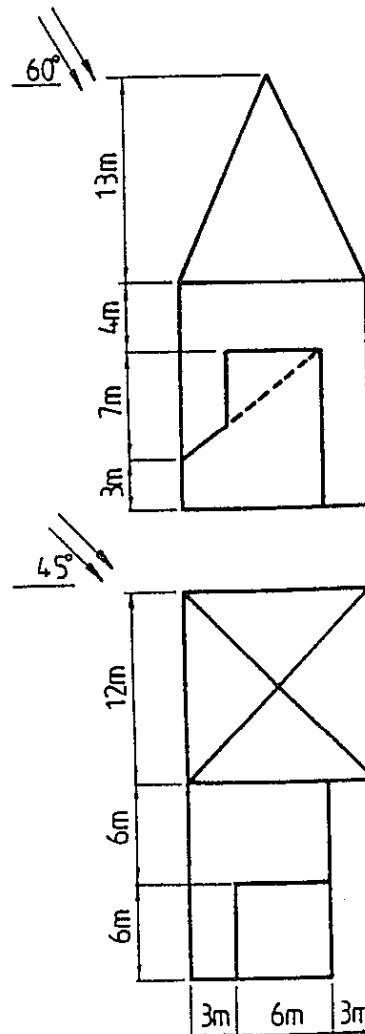
Scale 1 : 200

FIG.3

4. Fig. 4 shows the outline plan of a hyperbolic paraboloid structure ABCD. The corners A and B are at ground level, corner C is 1.5 m above ground level and corner D is 5.75 m above ground level.

(a) Draw the plan of the structure and project an elevation and end elevation.

(b) Determine the true shape of the sections R-R and S-S through the structure.
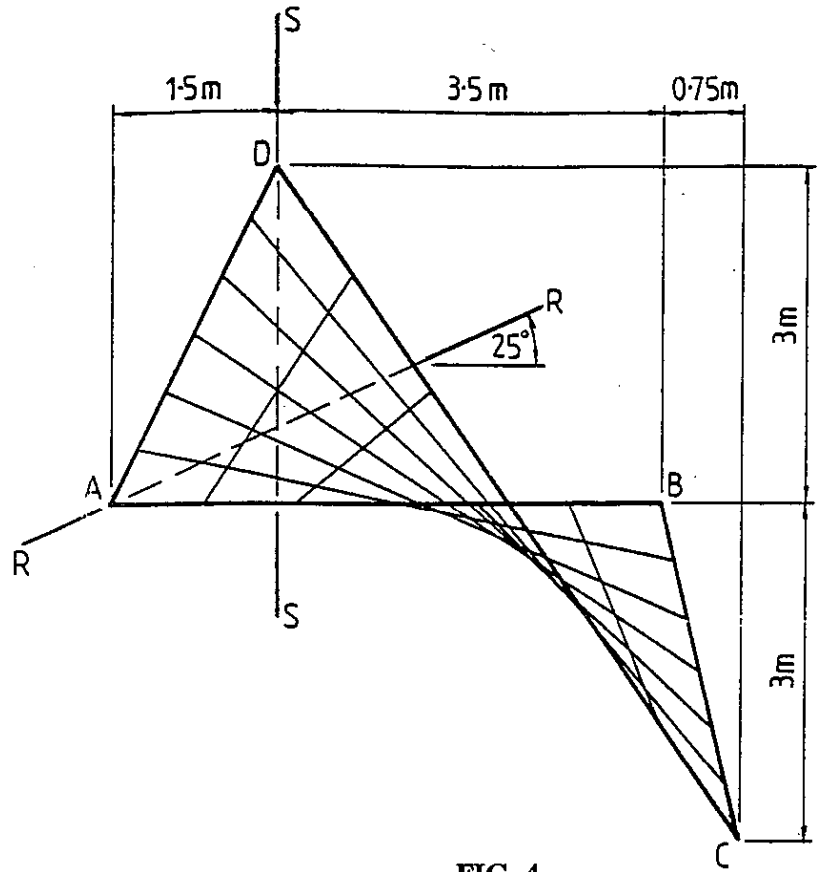
Scale 1 : 50

FIG. 4

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5. Fig. 5 shows the plan and cross section S-S of entrance steps to a building. Draw an isometric view of the steps.

Scale 1 : 10

FIG. 5

OVER →
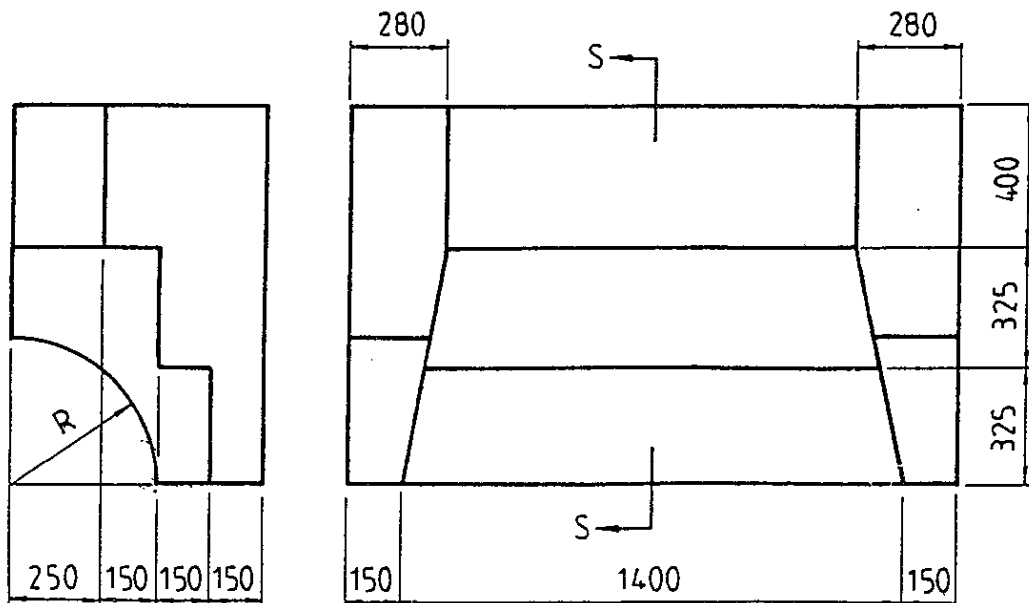
The outline plan and elevation of a building are shown in Fig. 6. The building is elliptical in plan and A and B are the focal points of the ellipse. The curve CDE in elevation is parabolic.

(a) Draw the given views of the building.

(b) Project an end elevation of the building.

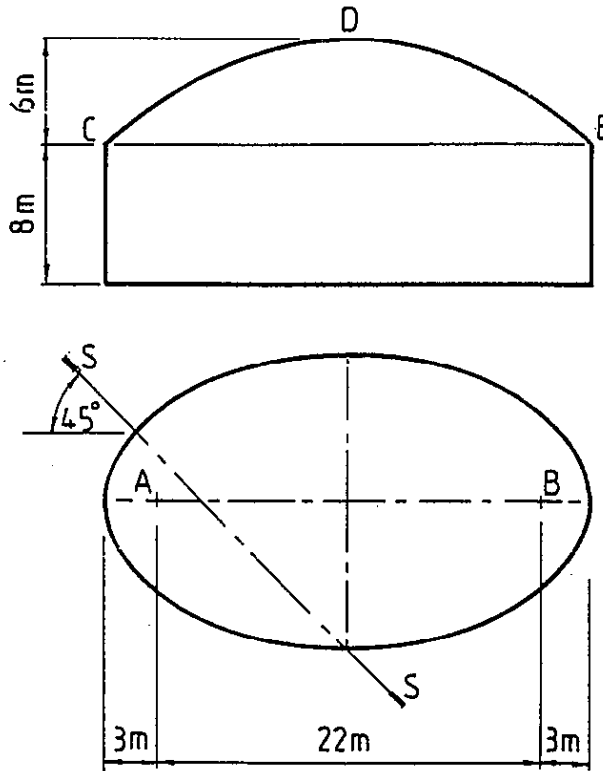(c) Determine the true shape of the section S-S through the building.

Scale 1 : 200

FIG.6

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 F. Determine the minimum height of the object if it is visible from the ground at G.

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

M.83(L)S

SCRÚDÚ ARDTEISTIMÉIREACHTA, 1999
LEAVING CERTIFICATE EXAMINATION, 1999

Scale
Scála 1:1000