LEAVING CERTIFICATE EXAMINATION, 1987

TECHNICAL DRAWING - ORDINARY LEVEL - PAPER II (B)

BUILDING APPLICATIONS

FRIDAY, 26 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.

1. Fig. 1 shows the outline plan and elevation of a concrete shelter. Draw a perspective view of the building when the position of the spectator is 5.5 m from the corner A, the picture plane touching the corner A and the horizon line 1.7 m above the ground line.

Scale 1 : 50

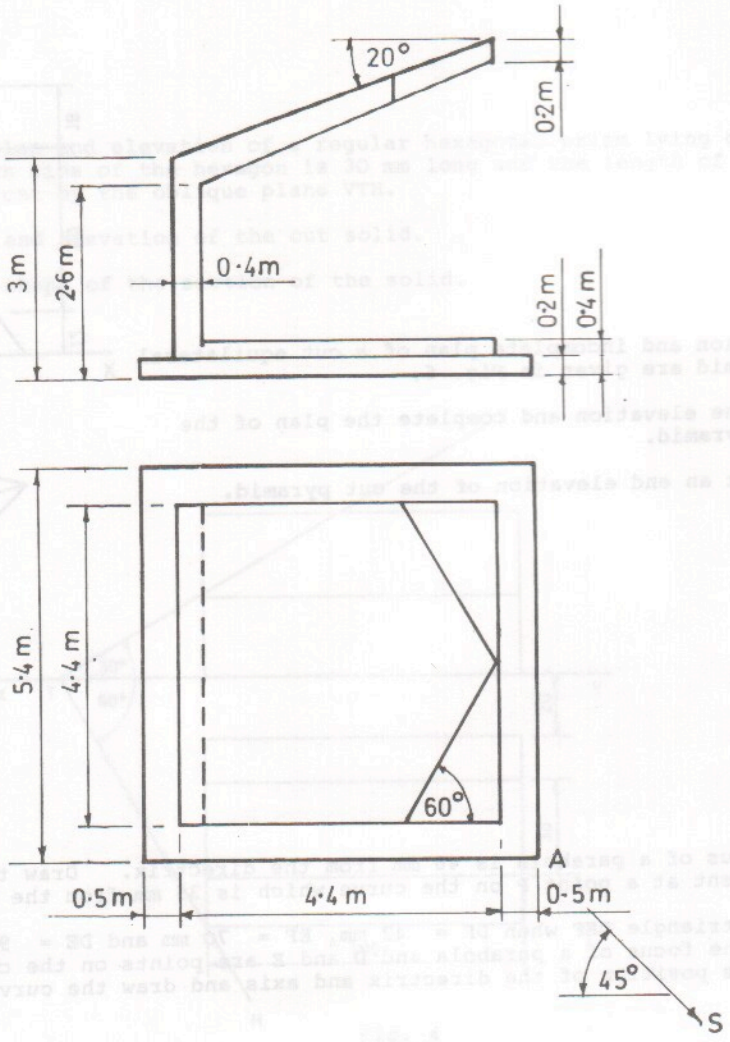

Fig.1

2. Fig. 2 shows the outline plan of a roof. All the surfaces have a pitch of 30°.

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

(b) Develop the surfaces A, C and E.

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

Scale 1 : 100

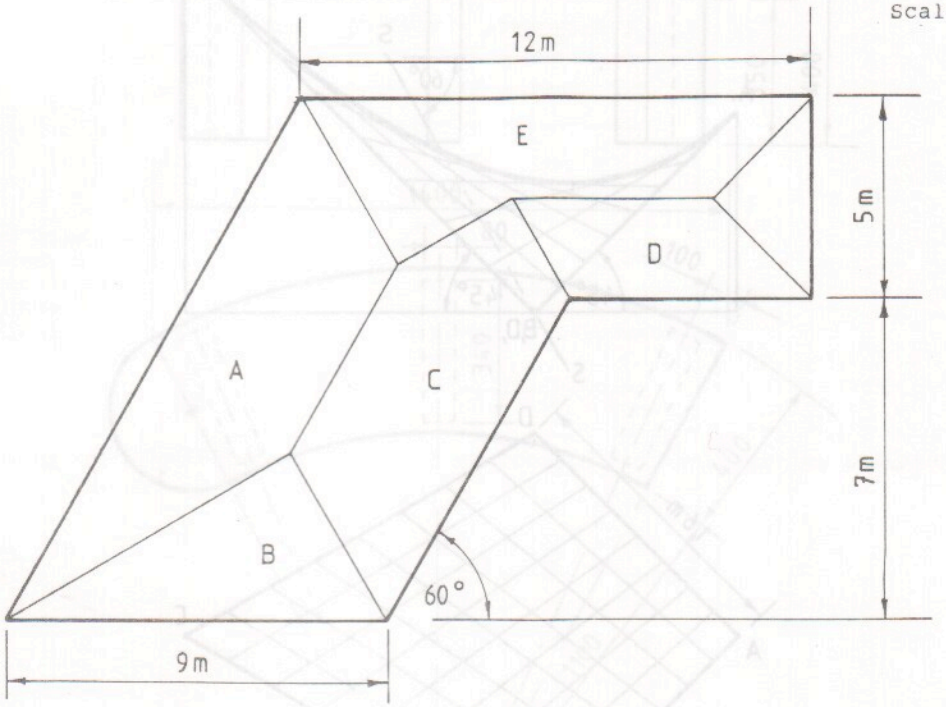

Fig. 2

3. Fig. 3 shows the outline plan and elevation of a house with two single-pitch roof surfaces. Draw the given views and determine the shadows cast in plan and elevation when the direction of the light is as shown.

Scale 1 : 100

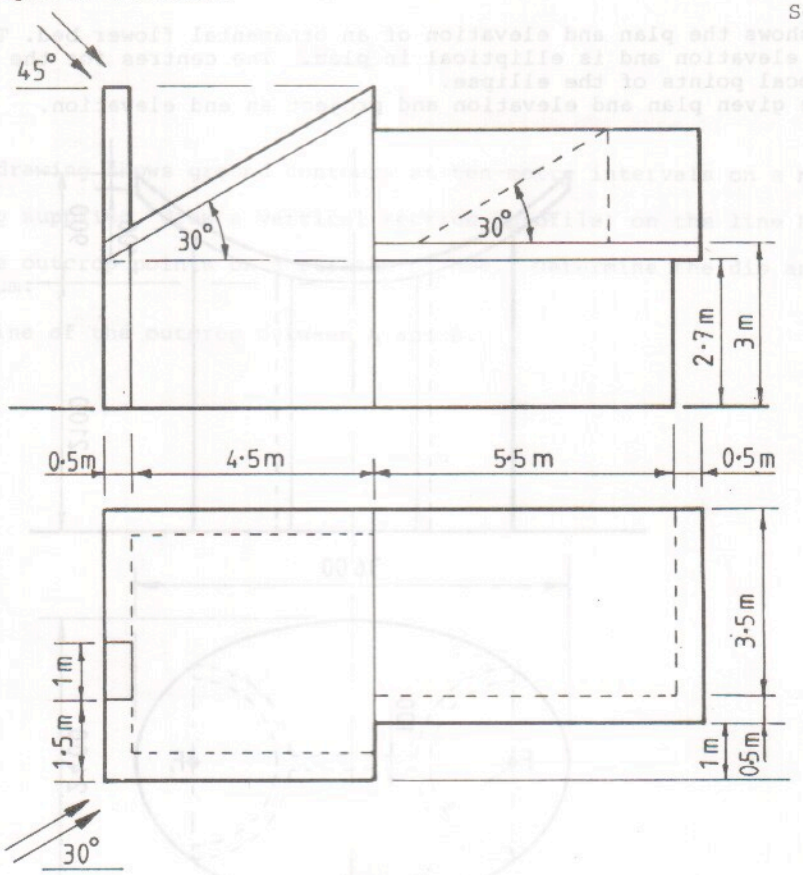

Fig. 3

4. Fig. 4 shows the plan and elevation of a hyperbolic paraboloid roof surface. Nine elements in each direction are also shown.

(a) Draw the given plan and elevation and project an end-view.

(b) Show the true shape of section S-S through the roof surface.

Scale 1 : 200

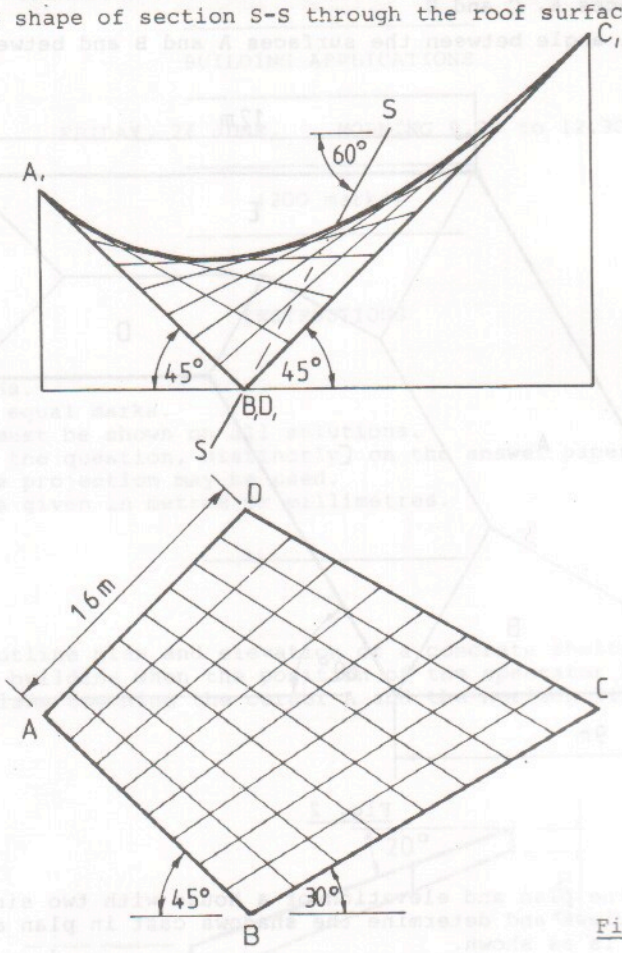

Fig. 4

5. Fig. 5 shows the plan and elevation of an ornamental flower bed. The top surface is parabolic in elevation and is elliptical in plan. The centres for the semi-circles in plan are on the focal points of the ellipse.

Draw the given plan and elevation and project an end elevation.

Scale 1 : 20

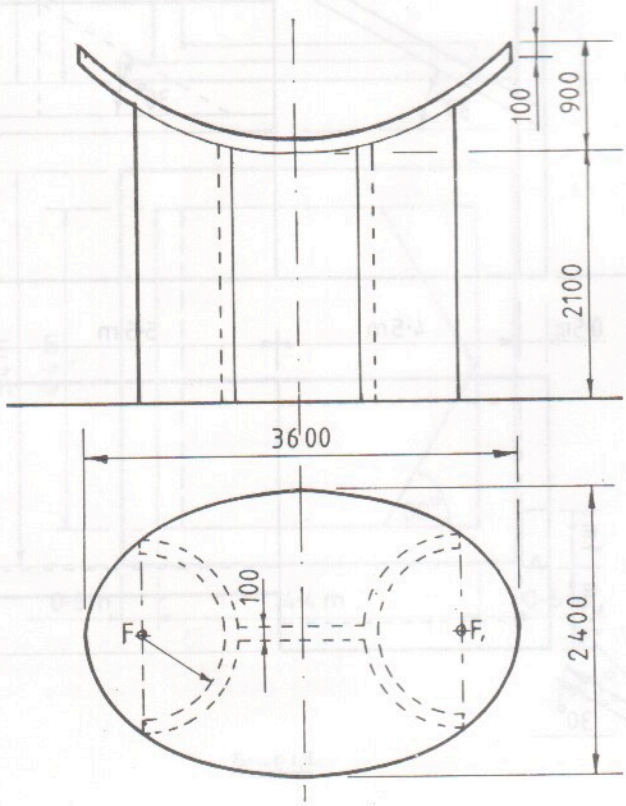

Fig. 5

6. Fig. 6 shows the plan and elevation of a segmental garden seat in concrete. Draw the given plan and elevation and make an isometric drawing of the seat.

Scale 1 : 10

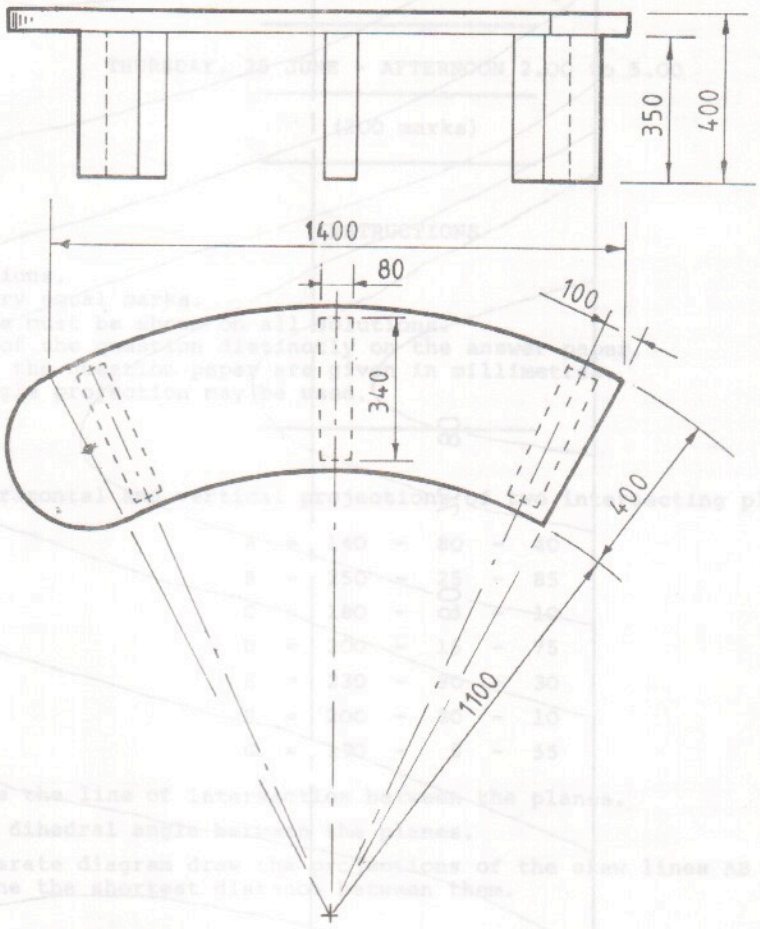

Fig. 6

7. The accompanying drawing shows ground contours at ten-metre 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 a stratum of ore. Determine the dip and strike of the stratum.

(c) Draw the outline of the outcrop between A and B.

E
D
A
B
C
Scale 1:1000
Scála 1:1000
50
40
50
50
40
50
60
60
60
70 80 90
80
70
60
50
40
50