

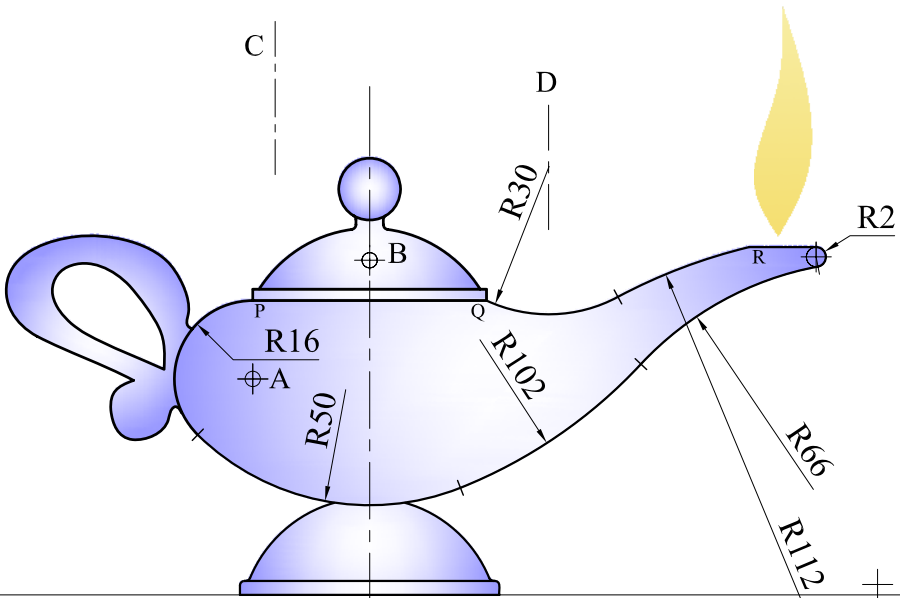
Question 1
The figure on the right shows the profile of a magic lamp.

The centre of R16 is given as centre A.
The centre of R50 is given as centre B.
The centre of R102 lies on centreline C.
The centre of R30 lies on centreline D.

On the given start lines below, complete the figure showing clearly the constructions necessary to locate the centres and the tangential points.

Note: P,Q,R, are tangential points

12 marks

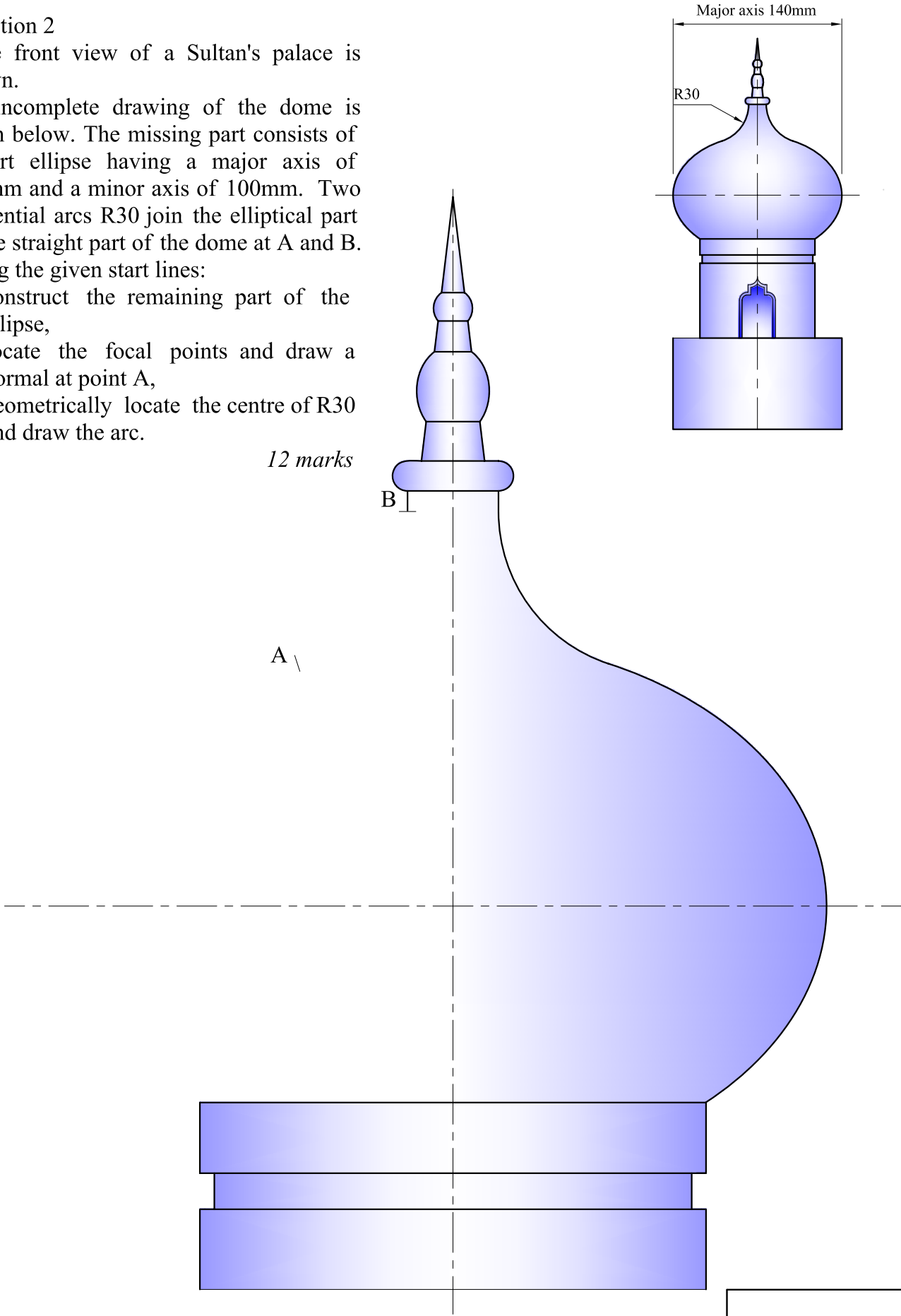


Question 2
The front view of a Sultan's palace is shown.

An incomplete drawing of the dome is given below. The missing part consists of a part ellipse having a major axis of 140mm and a minor axis of 100mm. Two tangential arcs R30 join the elliptical part to the straight part of the dome at A and B. Using the given start lines:

- a) construct the remaining part of the ellipse,
- b) locate the focal points and draw a normal at point A,
- c) geometrically locate the centre of R30 and draw the arc.

12 marks



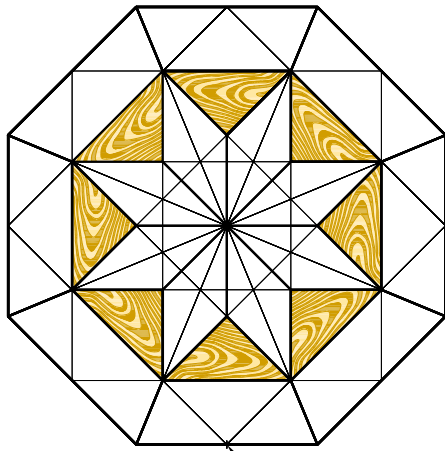
Question 3

The figure shows an octagonal cheese cutting board made of different types of wood. All the construction lines necessary to produce the decorative design have been left visible. You are asked to analyze carefully the constructions and:

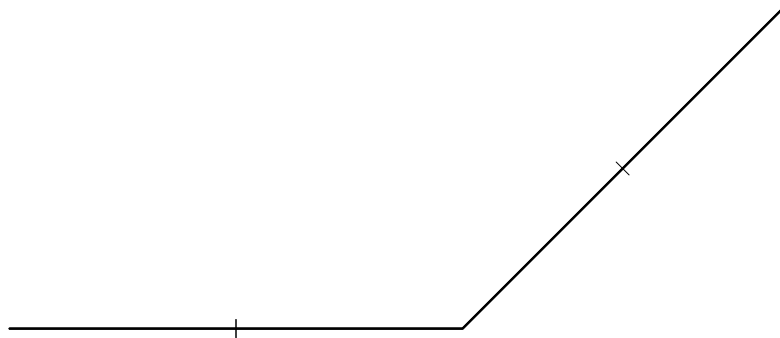
- a) reconstruct the design on the given start lines,
- b) render the shaded areas to denote a wooden texture.

Note: It is advisable that the octagon is drawn by means of a suitable set square.

12 marks



Midpoint



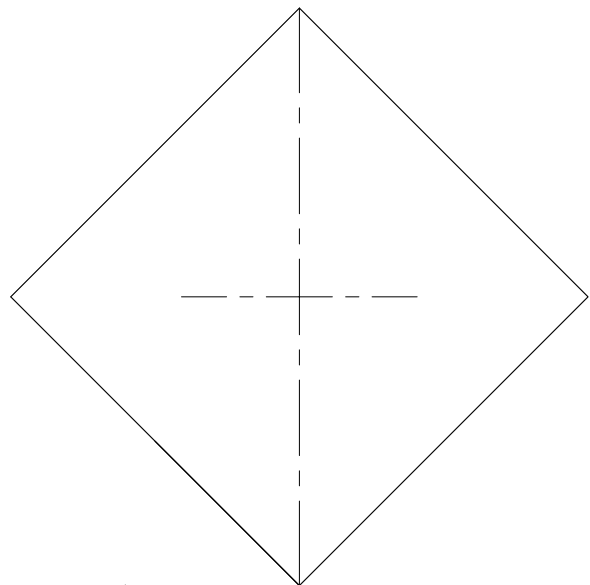
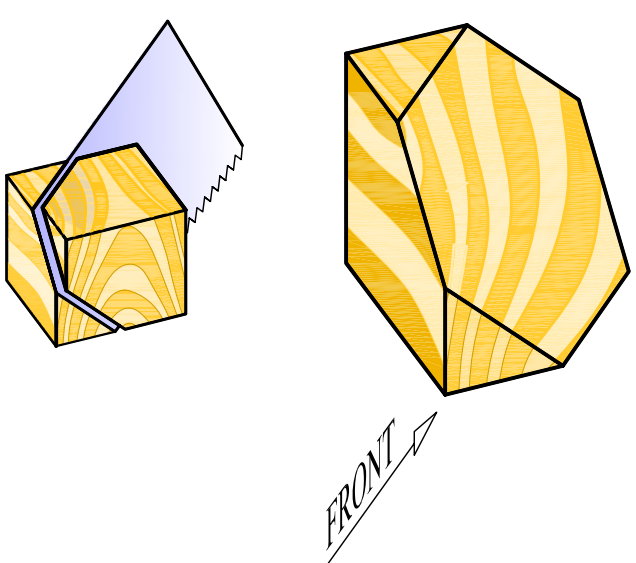
Question 4

The figures on the right show a cube which has been cut in two parts. An incomplete plan and a front elevation of the lower part of the cube are given below.

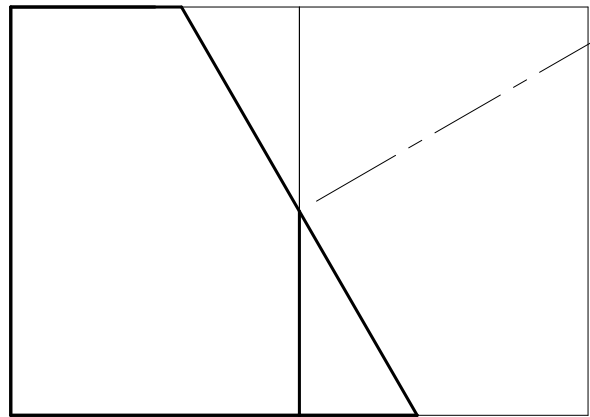
- a) Complete the plan.
- b) Draw the true shape of the cut on A-A.

Note: Do not shade your drawing.

12 marks

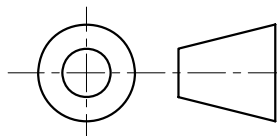


PLAN



FRONT ELEVATION

TRUE SHAPE OF CUT

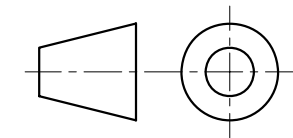
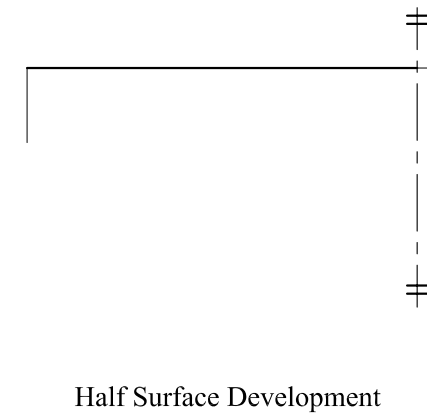
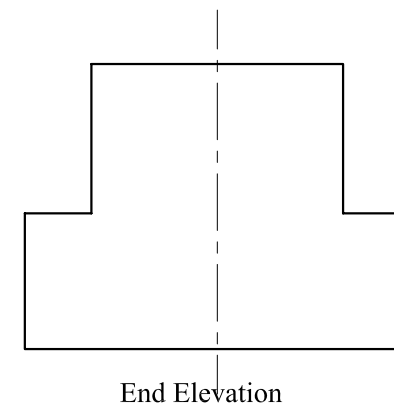
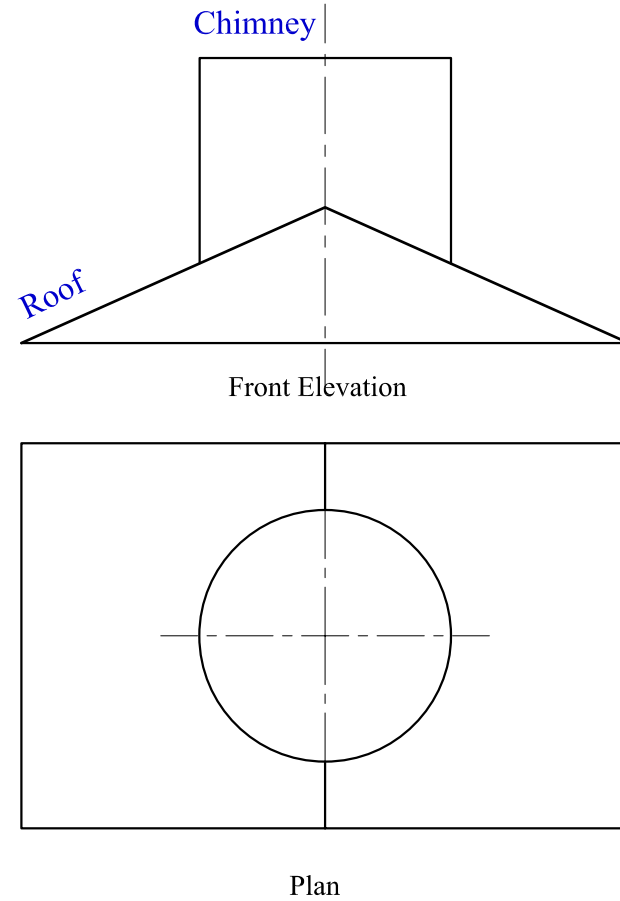
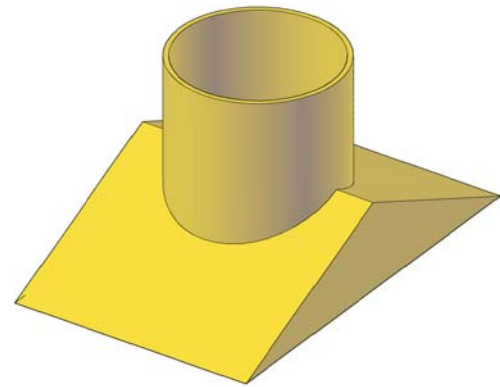


A pictorial view of a cylindrical chimney mounted on a roof of an industrial building is shown below.

A front elevation, a plan and an incomplete end elevation of the assembly are given on the right.

- complete the end elevation,
- draw a half surface development of the chimney.

14 marks



VP1

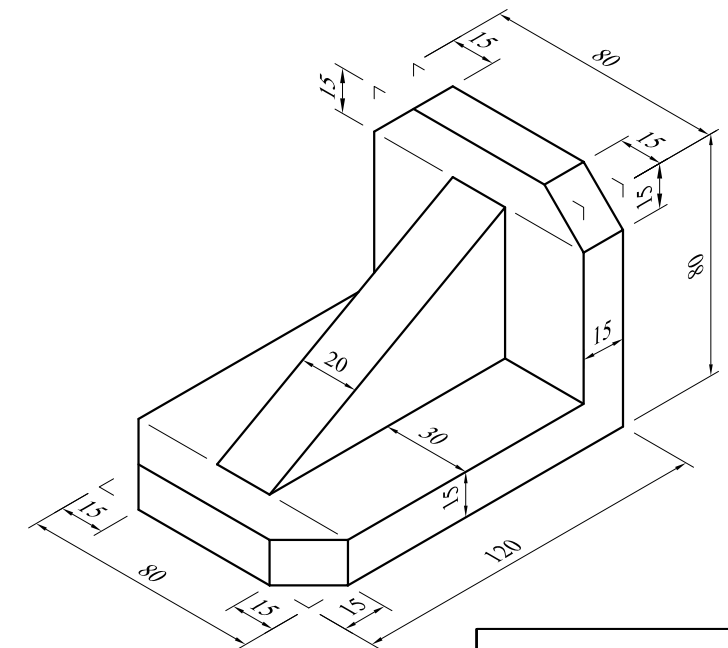
WP2

Question 6

An isometric view of a book end is given.

In the space provided, using the given start lines and vanishing points, draw a two point estimated perspective view of the object.

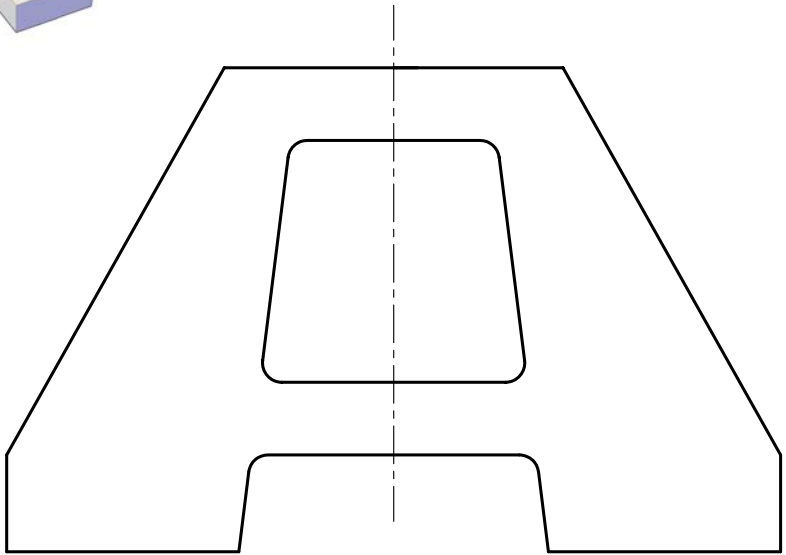
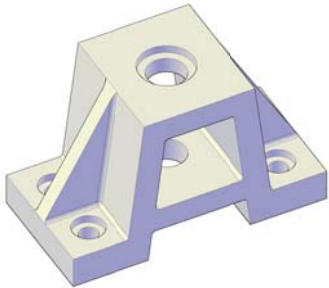
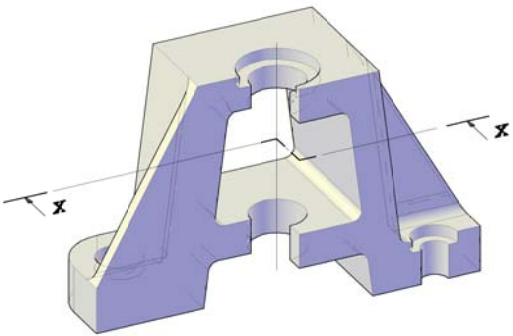
14 marks



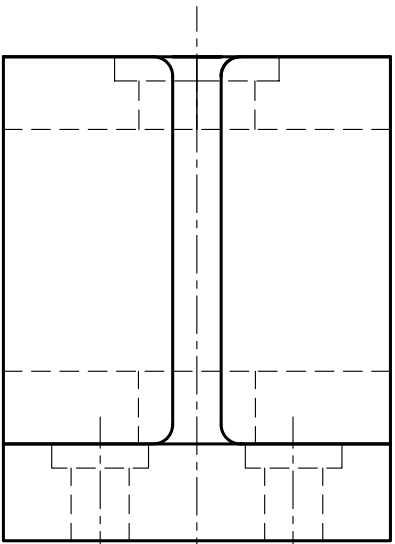
Question 7
 A complete and a sectional pictorial view of an ANCHOR BASE are shown.
 An incomplete front elevation, an end elevation and a plan are given below.
 In the space provided: a) complete the Sectional Front X-X,
 b) print the angle of the projection used.

Note: Do not show any hidden detail.

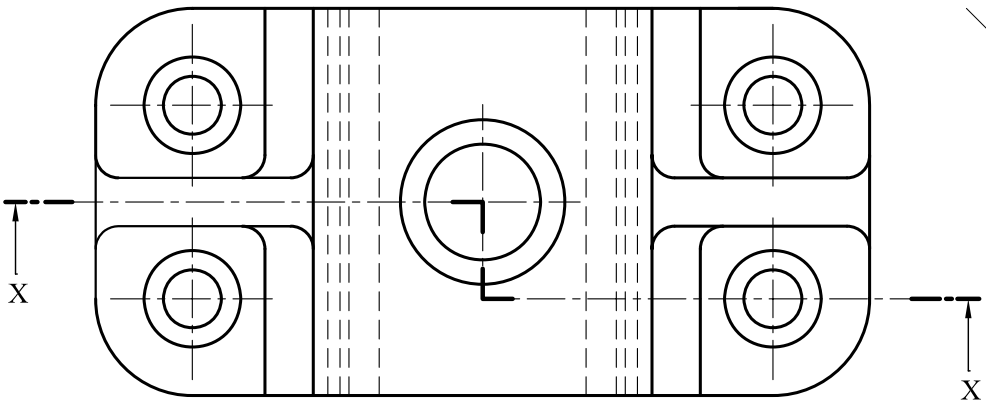
12 marks



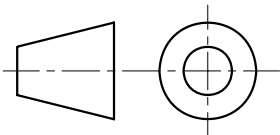
SECTIONAL FRONT X-X



END ELEVATION



PLAN



.....ANGLE PROJECTION

Question 8
 The mechanism shown in the pictorial view consists of the following items:

- A crank AB which rotates about centre A.
- An arm CD oscillates about centre C.
- A link BP which connects the crank at B and the arm at D.

Plot the locus of point P for one half revolution of the crank AB from X to Y.

12 marks

