N.B.

1. Question **No 1** is compulsory. Solve any **four** out of remaining **six** questions.
2. Use your own judgment for any unspecified dimension.
3. Solve by first angle method only.
4. Retain all construction lines.

Q1.Figure 1 shows pictorial view of an object .Draw
i) Front view   (5)
ii) Sectional right hand side view along section plane B-B.   (4)
iii) Top view   (4)
Dimension the views.   (2)

Figure 1

Q2) A square pyramid of 30 mm edge of base and 60 mm length of axis is having an edge of base inclined at 45° to the H.P. _ J in the V.P. Draw projections if the triangular face containing that edge is inclined at 30° to the V.P. **(15)**

Q3) A pentagonal pyramid, base 30 mm side and axis 60 mm long rests on one of its triangular faces in H.P. with an edge of base perpendicular to V.P. It is cut by a section plane which is perpendicular to H.P. and inclined at 30° to V.P. and bisecting the axis. Draw sectional front view, T.V. and true shape of section of pyramid. Also draw development of the lateral surface of uncut pyramid.   (15)

Q4 a) The projections of a line PQ measures 80 mm in the top view and 70 mm in the front view .The midpoint of the line is 45 mm in front of V.P. and 35 mm above H.P. End P is 10 mm in front of V.P. and nearer to it. The other end is nearer to H.P.   Draw   projections   of   the   line,   find   the   true   length   and   true   inclinations. (12)

[Turn over

b) Draw free hand sketch showing three views of a hexagonal nut. (3)

Q5) Figure 2 shows front view and right hand side view of an object. Draw
    i) Sectional front view along section plane A-A (4)
    ii) Sectional side view along section plane B-B (4)
    iii) Top view. (5)
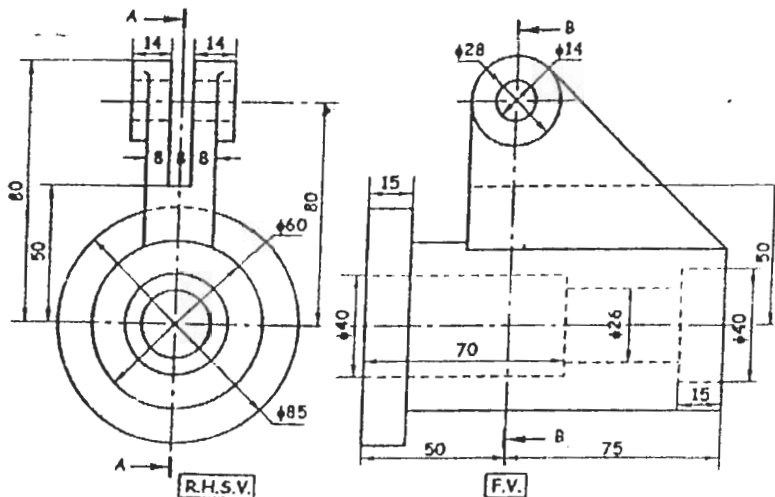   Dimension the views (2)

Figure 2

Q6 a) Two fixed points are 100 mm apart .A point P moves in such a way that the sum of its distances from the two fixed points is always a constant and equal to 150 mm. Trace the path of the point and name the curve. (10)

b) Draw free hand sketches of the following:-
    i) Conventional representation of internal and external threads when sectioned (2)
    ii) Acme thread profile (1)
    iii) Two views of head of any one set screw with its appropriate name. (2)

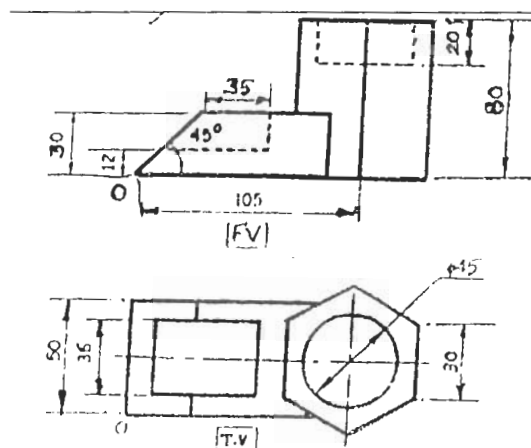**Q7)** Figure 3 shows two views of an object. Draw isometric view of the object. (15)

Figure 3