

[Time: Three Hours]

[Marks:60]



Please check whether you have got the right question paper.

- N.B:
1. Question No. 1 is compulsory.
 2. Attempt any three questions out of remaining five questions.
 3. Write all answers on drawing sheets only & use both the sides of the sheets.
 4. Use your own judgment for any unspecified dimension.
 5. Retain construction lines.
 6. All dimensions are in mm.

- Q.1 (a)** A circle of diameter 50 mm rolls without slipping along a straight horizontal line for half revolution; it slips for 25 mm and stops. Draw locus of point on the circle which is initially in contact with the directing line. Name the curve. [6]
- (b)** Figure-1 shows the pictorial view of an object. Draw the following views using first angle method of projection
- (i) Draw front view in the X direction [4]
 - (ii) Top view [4]
 - (iii) Insert all major dimensions [1]

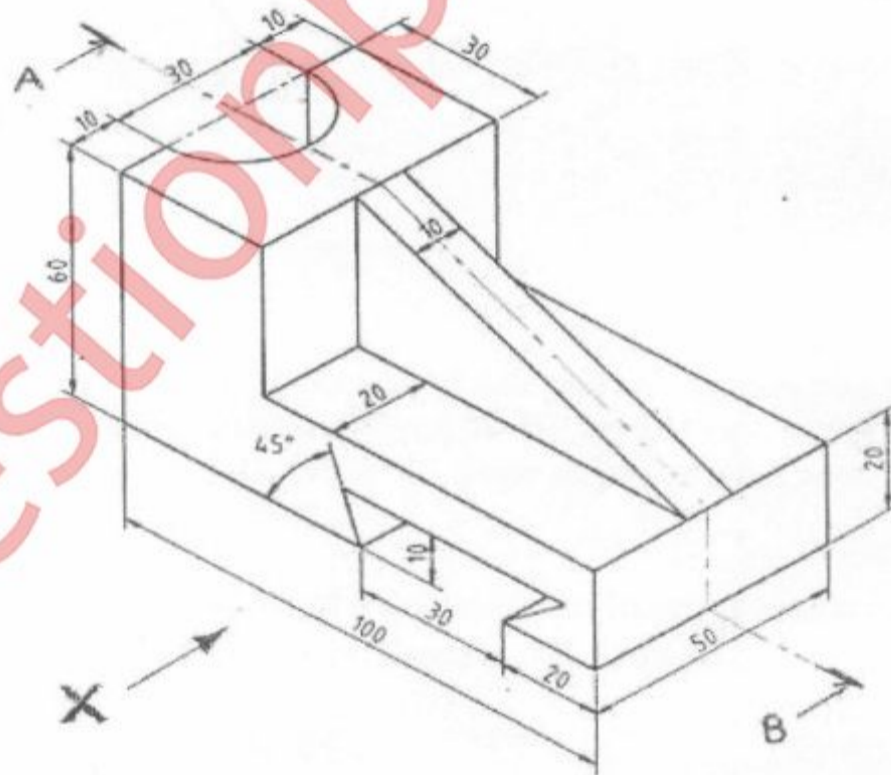


Figure-1

Q.2 Figure-2 shows a pictorial view of machine part. Draw the following views.

(a) Sectional FV (Sect. along B-B)

[5]

(b) LHSV

[4]

(c) TV.

[4]

Insert all major dimensions

[2]

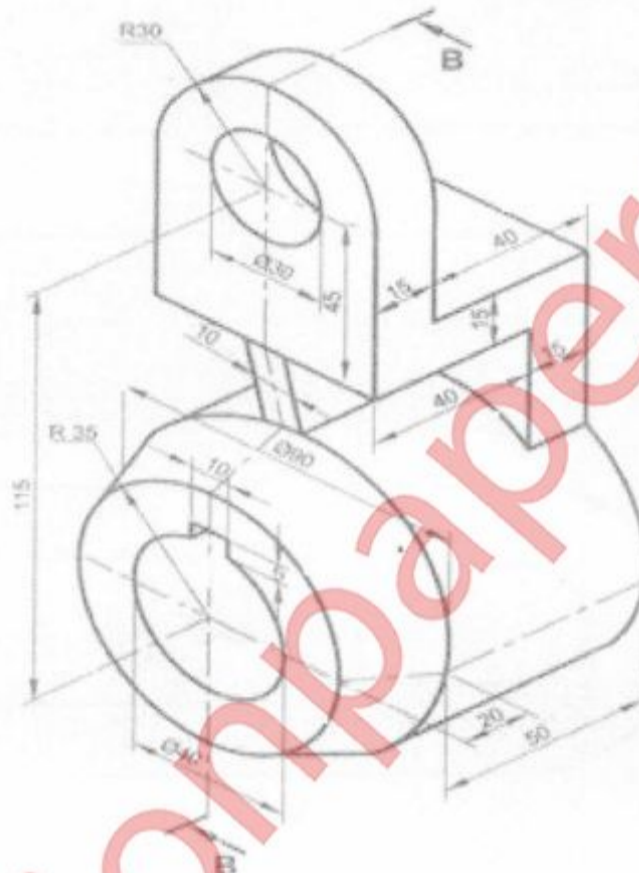


Figure-2

Q.3 A pentagonal pyramid of 30 mm side of base and axis 60 mm long is lying on one of its triangular surface on the HP, so that top view of its axis is inclined at an angle of 45° to the VP, Draw its projection if apex is nearer to the observer [15]

Q.4 (a) A cylinder of 50 mm diameter of base and 70 mm length of an axis is resting on one of the points of the circumference in VP. Draw its projections if one of the generators is inclined at 30° to VP. [6]

- (b) Draw the Isometric view of object of which orthographic views are as shown [9]
in Figure.-3.

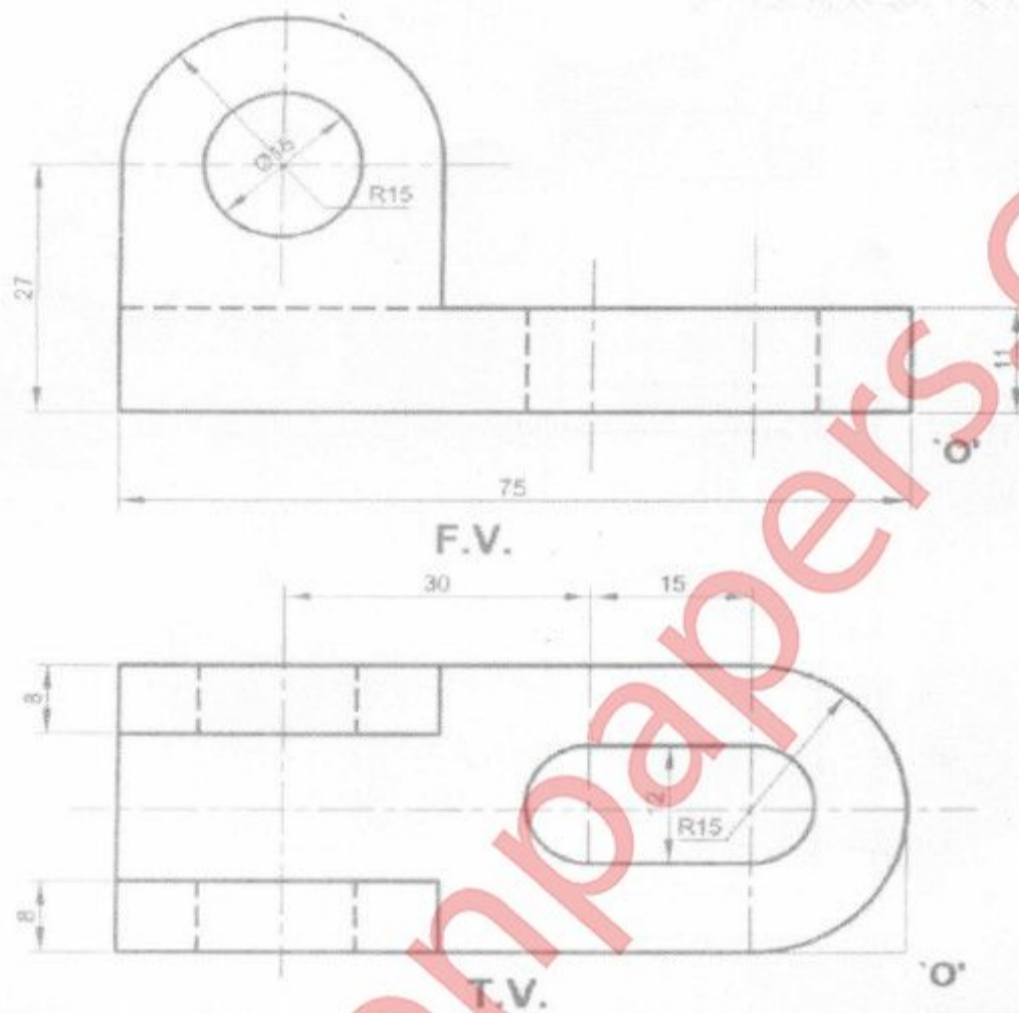


Figure-3

- Q.5 A cone of base diameter 50 mm and axis height 65 mm is resting on HP on one of its generators with axis parallel to the VP. It is cut by A.I.P. such that the true shape of the section is a parabola with the axis length equal to 60 mm. Draw the projections of cut solid & also draw development of lateral surface of remaining part of the cone (apex is removed). [15]
- Q.6 (a) A line AB 70 mm long is inclined at 30° to H.P. and 60° to V.P. Draw its projections if end A is in both HP & VP. Determine distance of end B from both the reference planes. Assume any quadrant for end B. [9]

- (b) Draw isometric projection using natural scale of object of which [6]
orthographic views are as shown in Figure.-4.

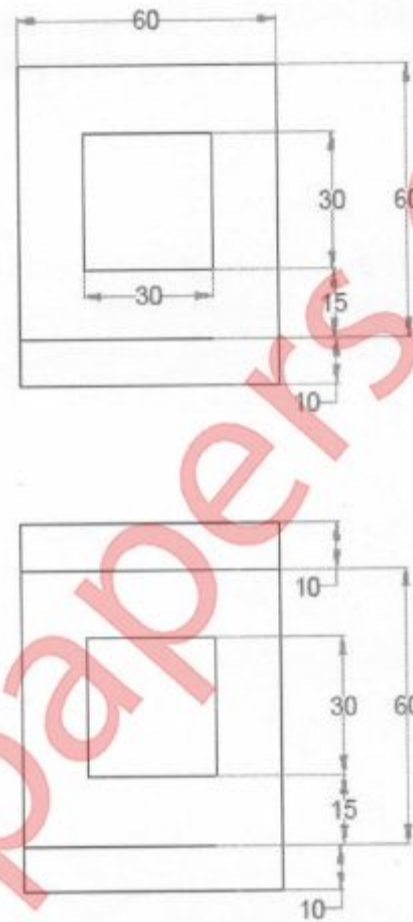


Figure-4