

(3 Hours)

KR-3663

[Total Marks : 100

- N. B. (1) Question No.1 is compulsory.
 (2) Attempt any four questions out of remaining six questions.
 (3) All dimensions in figures are in mm.
 (4) Use your own judgment for any unspecified dimensions assuming suitable data if necessary.
 (5) Use only first angle method of projection.
 (6) Retain all construction lines.
 (7) Use scale 1:1 only.

Q 1 Figure 1 shows front view and top view of the bracket, Draw the following views

- | | |
|-------------------------------------|---|
| (a) Sectional front view along A-A | 4 |
| (b) Top view | 4 |
| (c) R.H.S.V. | 5 |
| Insert at least 8 major dimensions. | 2 |

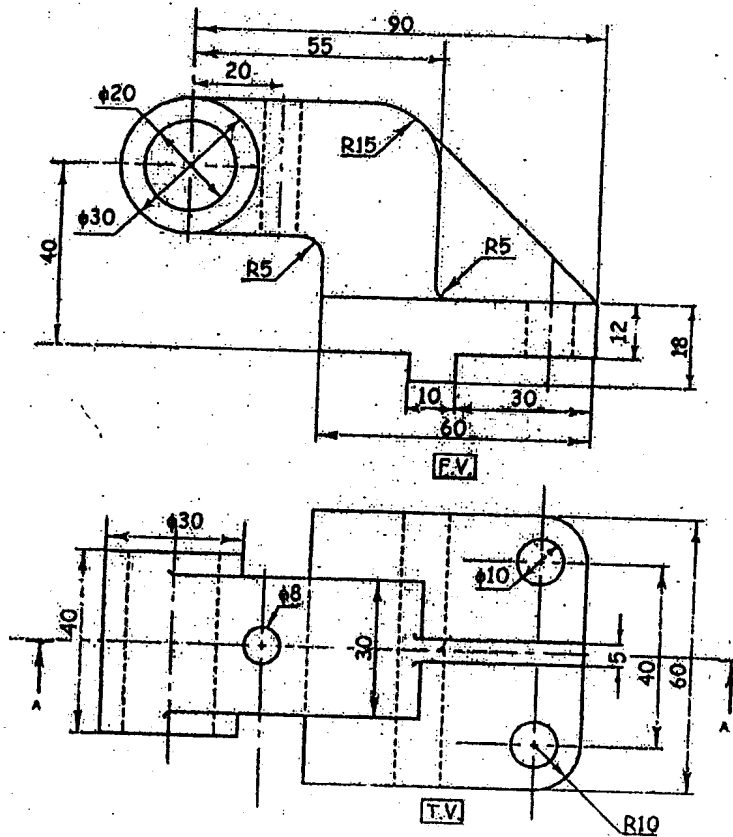


FIGURE 1

[TURN OVER

- Q 2 Figure 2 shows a pictorial view of a machine part .Draw
- (a) Sectional front view looking along the arrow X (section A-A)
 - (b) Top view
 - (c) L.H.S.V
- Insert at least 10 major dimensions

5
4
4
2

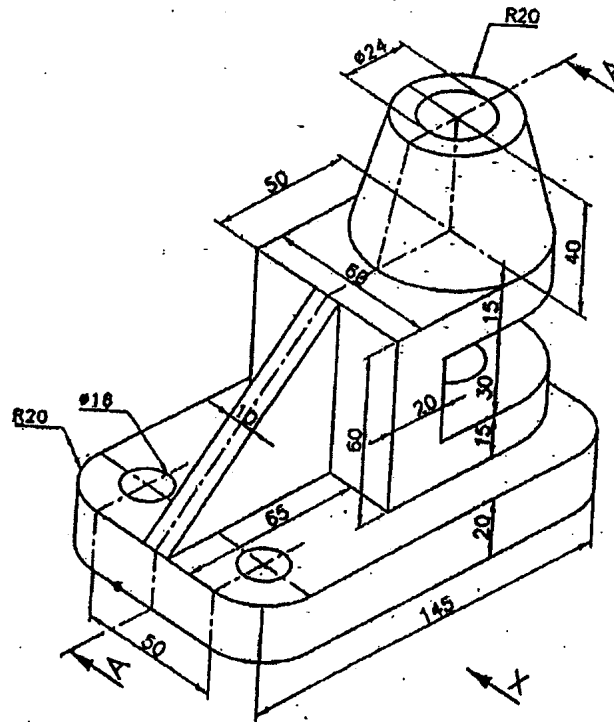


FIGURE 2

- Q 3 (a) The top view and the front view of a line AB measures 70 mm and 58 mm respectively. The line AB is inclined at an angle of 35° to the H.P. The end A is 15 mm above the H.P. and 12 mm in front of the V.P. The other end B is also in the first quadrant. Draw the projections of line AB and find its true length and true inclination with the V.P.
- (b) The distance of a focus from the directrix is 50 mm A point moves in such a way that the eccentricity is equal to $3/2$.Draw the locus of the point and name the curve also draw tangent and normal at any point on the curve.

8
7

- Q 4 A pentagonal pyramid 35mm base edges and 70 mm height is resting on H.P. with one of its triangular surface perpendicular to H.P. and parallel and nearer to V.P Draw its projections

15

Q 5 (a) A hexagonal pyramid of 25 mm edge of the base and axis 50 mm long is resting on its triangular face in H.P. with the axis parallel to the V.P. It is cut by a section plane perpendicular to the H.P. inclined at 30° to the V.P. and passing through a point on the axis 20 mm from the base. Draw top view, sectional front view and true shape of the section when the apex is removed. 12

(b) Draw neat, proportionate free hand sketches of the following :-

(i) Acme thread profile

1

(ii) Hexagonal headed bolt

2

Q 6 A cone of diameter of base 90 mm and height 90 mm stands vertically on its base in H.P. A semicircular hole of diameter 60 mm is cut through the cone, the axis of the hole is horizontal and intersects the axis of cone and is 35 mm above the base of the cone. The flat face of the hole contains the axis of the cone and is perpendicular to V.P. Draw the development of the cone with hole. 15

Q 7 (a) Draw neat, proportionate free hand sketches of the following:-

(i) Square nut.

1

(ii) Eye Foundation Bolt

2

(b) Figure 3 shows two views of an object. Draw isometric view of the object. 12

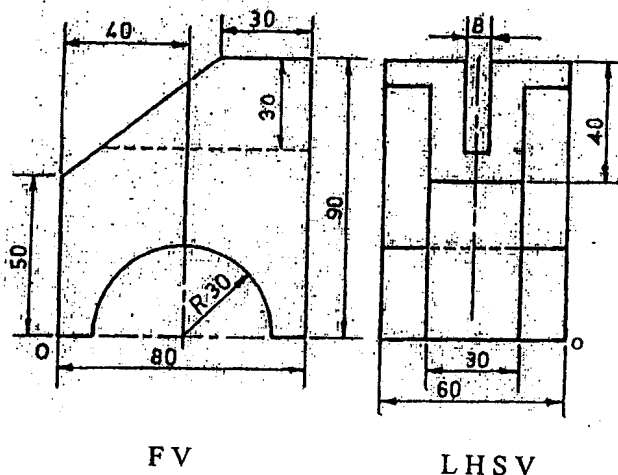


FIGURE 3