

(3 Hours)

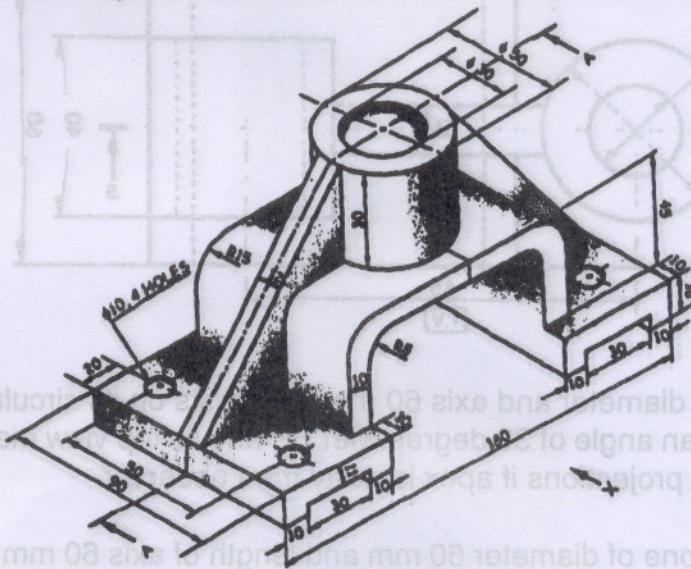
[Total Marks : 75]

Engineering Drawing

4/01/10

- N.B.** (1) Question No. 1 is compulsory.  
 (2) Attempt any four questions out of remaining six questions.  
 (3) Use drawing sheets only for answering.  
 (4) All dimensions in figure are in mm.  
 (5) Use your own judgement for any unspecified dimensions.  
 (6) Use only first angle method of projections.

1. Figure shows a pictorial view of a spindle bearing. Draw to a full scale, the following views using first angle method of projection :—
- (a) Sectional Front View along section plane A-A. 4
  - (b) Left hand side view 5
  - (c) Top view. 4
- Insert at least ten major dimensions. 2

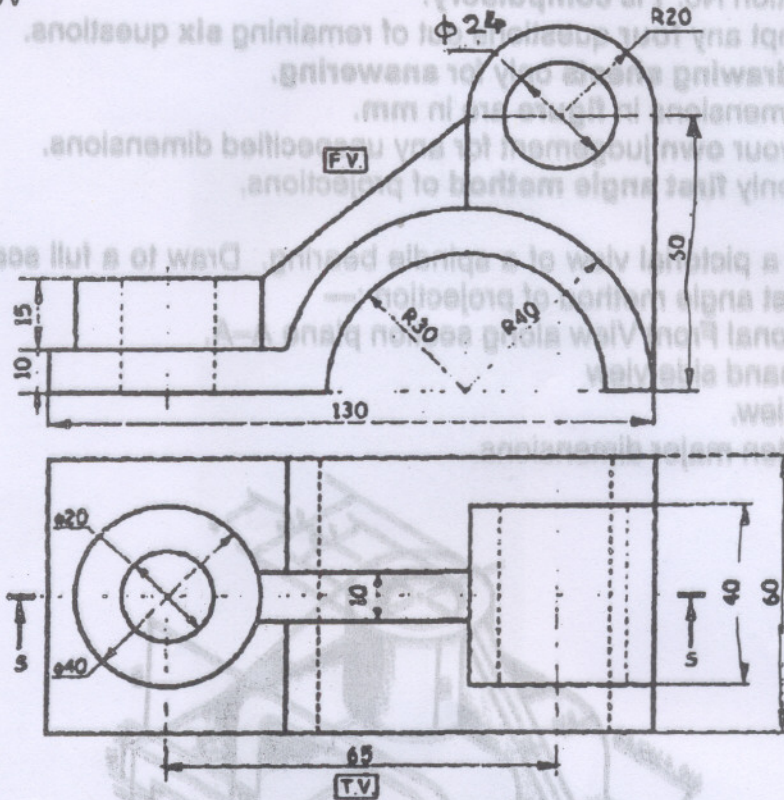


2. (a) Side View of a line AB 75 mm long, makes an angle of 40 degree with XY line. Draw TV and FV of line when length of side view is 50 mm. Take point A to be 15 mm above HP and 55 mm in front of VP the point B being closest to VP. 8
- (b) The distance of a focus from the directrix is 60 mm. Point moves in such a way that the eccentricity is 2/3. Draw the locus of the point and name the curve. Also draw tangent and normal at any point of your choice. 7
3. (a) A cylinder with base diameter 70 mm and axis length 84 mm has its base in HP. A square hole of side 36 mm is punched centrally having its sides equally inclined with HP. Draw the development of lateral surface with hole. 11
- (b) Draw neat proportionate free hand sketches of following :— 4
- (i) Square thread profile
  - (ii) Hexagonal headed bolt.



4. Refer figure and draw :—

- (a) Sectional FV along s-s
- (b) LHSV
- (c) TV



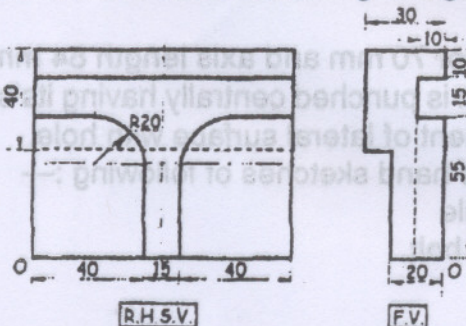
5. A cone, base 50 mm diameter and axis 60 mm long rests on its circular rim on the HP with the axis making an angle of 30 degree with HP and its top view making an angle of 45 with VP. Draw the projections if apex is away from observer. 15

6. (a) A right circular cone of diameter 60 mm and length of axis 60 mm is resting on HP on its base. It is cut by a cutting plane perpendicular to VP and inclined to HP such that the true shape is parabola of height 60 mm. Draw FV, Sectional TV and the true shape of section. 11

(b) Draw neat, proportionate free hand sketches of following :— 4

- (i) Square Headed bolt
- (ii) Hexagonal nut.

7. (a) Draw an Isometric view of the following using natural scale. (Refer figure). 11



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

- (i) Conventional representation of external thread
- (ii) Wing nut.