B.E. I & II Sem-I (Old + C.B.C.S. Pattern)

103 / 1BEAB05 - Engineering Graphics

P. Pages : 3 | GUG/S/19/11469

Time : Four Hours | * 1 1 4 0 * | Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Due credit will be given to neatness and adequate dimensions.
3. Assume suitable data wherever necessary.
4. Retain the construction lines.
5. Illustrate your answers wherever necessary with the help of neat sketches.
6. Solve question no. 1 or 2, 3 or 4, 5 or 6, 7 or 8 and 9 or 10.

1. a) The major axis of an ellipse is 120 mm long and the minor axis is 80 mm long. Find the foci and draw the ellipse by 'arcs of circles' method. **8**

b) A line AB, 75 mm long is inclined at an angle of 50° to the H.P. and 30° to the V.P. Its end 'A' is on the H.P. and 20 mm in front of V.P. Draw the projections of the line AB. **8**

OR

2. a) An inelastic string of 110 mm length is wound around a disc of 40 mm diameter. Trace the path of free end of string. **8**

b) The end point C of a straight line CD is 15 mm above the H.P. and 20 mm in front of the V.P. The elevation of a line is 60 mm long and inclined at 60° to xy. Draw the projections of the line if it is inclined at 30° to the H.P. Find the true length of the line and its inclination with V.P. **8**

3. a) A rectangular plane ABCD with side AB = 30 mm and BC = 50 mm is resting on the V.P. on its smaller side AB. Draw the projections of the plane when its surface makes an angle of 40° with V.P. and the side AB which is on V.P. is inclined at 30° to the H.P. **8**

b) A hexagonal plane of side 40 mm is resting on one of its corners on H.P. while corner opposite to it is on V.P. Draw the three views of the plane if it is inclined at 30° to H.P. and 60° to V.P. **8**

OR

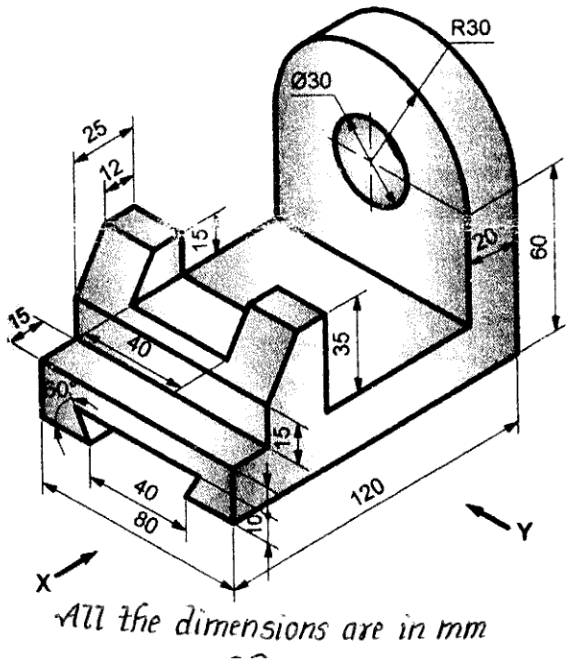
4. A pentagonal prism, side of base 25 mm and axis length 60 mm is kept on the V.P. on of the edge of its base such that the rectangular face containing that base edge makes an angle of 30° with V.P. Draw the projections of the prism when the base edge in V.P. makes an angle of 45° with H.P. **16**

5. A cylinder, 65 mm diameter and 90 mm long, has its axis parallel to H.P. and inclined at 30° to V.P. It is cut by a vertical section plane in such a way that the true shape of the section is an ellipse having the major axis 75 mm long. Draw its sectional front view, true shape of the section and development of remaining part of the cylinder. **16**

OR

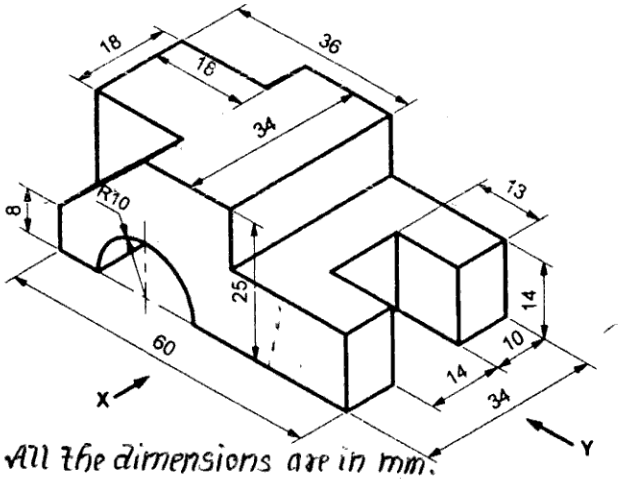
6. A hexagonal pyramid, base side 30 mm, length of axis 80 mm is resting on base edge on the H.P. with a triangular face containing that edge being perpendicular to the V.P. and inclined to H.P. at 60°. It is cut by a horizontal section plane passing through the midpoint of the axis. Draw the sectional top view, side view and development of remaining part. **16**

7. Draw the Front view, Top view and Right Hand side view of the object whose isometric view is as shown in figure below. **16**

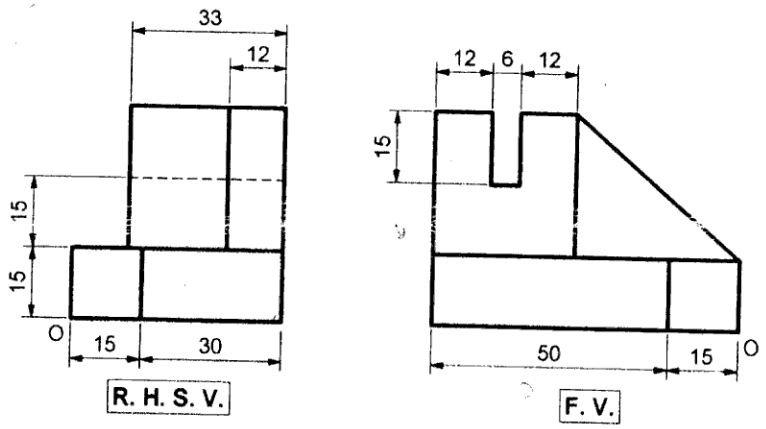


OR

8. The figure below shows the pictorial view of an object. Draw the following views : **16**
   i) Front view looking in the direction X
   ii) Side view looking in the direction Y
   iii) Top view



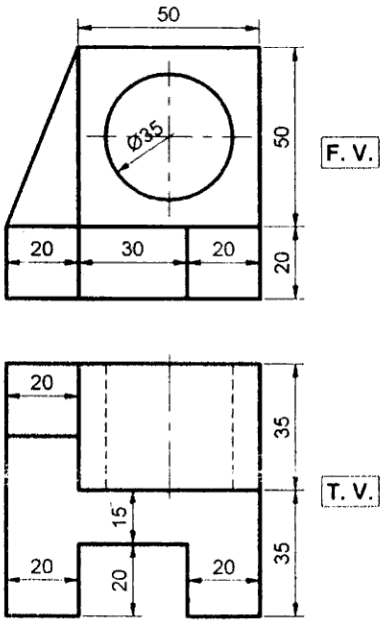
9. The figure given below shows Front view and Right Hand side view of an object. Draw its isometric projection. **16**



All dimensions are in mm.

OR

10. Draw isometric view of an object whose Front view and Top view are given below. **16**



All the dimensions are in mm.

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