CE/ME 124 (R-22)

Total No. of Questions : 10] [Total No.of Pages : 03

I/IV B. Tech. DEGREE EXAMINATIONS, AUGUST - 2024

Second Semester

CE / ME

ENGINEERING GRAPHICS

Time : **Three Hours** Maximum : **70** Marks

Answer ONE Question from each Unit.

All Questions carry equal marks. 5x14=70 M

UNIT - I

1. a) Draw the hyperbola given by the equation : $\frac{x^2}{39} - \frac{y^2}{9} = 1$, and label the vertices.

   Determine whether the transverse axis is horizontal or vertical.

   b) Draw a diagonal scale of RF = 3/100, showing meters, decimeters and centimeters and to measure up to 5 meters. Show the length of 3.69 meters on it.

(OR)

2. Draw a cycloid for one complete revolution of a circle having a 50 mm diameter. Draw tangent and a normal to the curve at a distance 35 mm above the base line.

UNIT - II

3. a) A 90 mm long line PQ, lying in the first quadrant, has its end P in the H.P. and end Q in the V.P. The line is inclined at 45^o to the H.P. and 30^o to the V.P. Draw its projections.

   b) A circular plane of diameter 80 mm is resting on a point of its periphery on H.P. such that it makes an angle of 40^o to the H.P. The diameter passing through the point of its resting on H.P. makes an angle of 60^o with V.P. Draw the projections of it.

(OR)

4. A straight line AB of true length 100 mm has its end A 20 mm above HP and 30 mm in front of VP. The top view of the line is 80 mm and front view is 70 mm. Draw the projections (Top View and Front View) of the line AB and obtain the true inclinations of the line AB with HP and VP.

P.T.O.

UNIT - III

5. A cone of 40 mm base diameter and 50 mm axis is resting on one of its generators in the HP which makes 30° inclination with the VP. Draw its projections.

(OR)

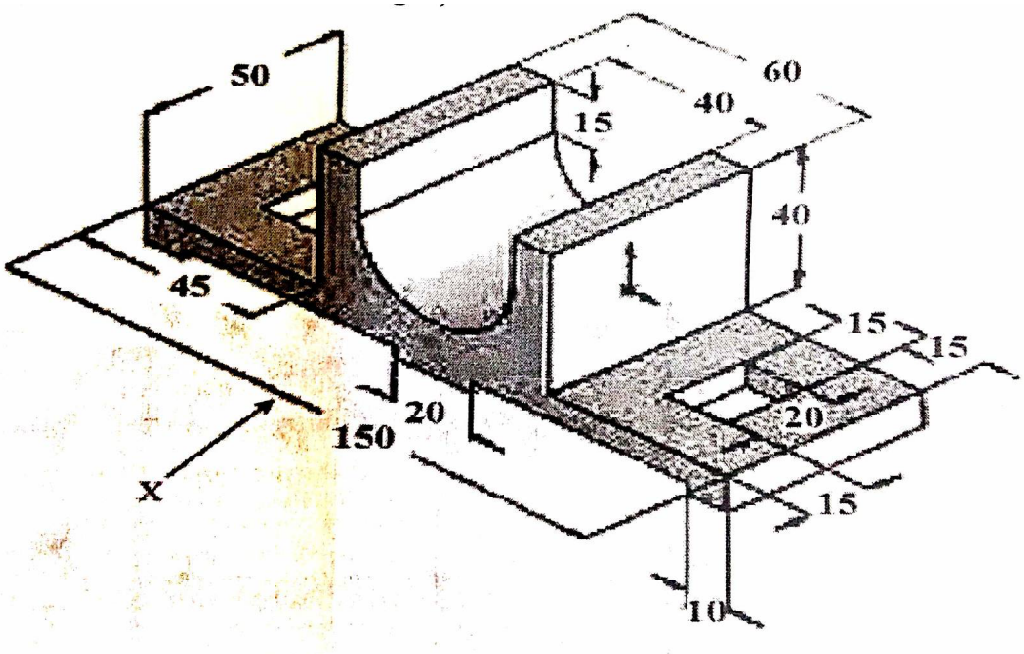
6. A pentagonal pyramid, base 25 mm side and axis 50 mm long has one of triangular faces in the V.P. and the edge of the base contained by that face makes an angle of 30 degrees with the H.P. Draw its projections.

UNIT - IV

7. A hexagonal pyramid, base 50 mm side and axis 100 mm long, is lying on the H.P. on one of its triangular faces with the axis parallel to the V.P. A vertical sectional plane the H.T of which makes an angle of 30° with the reference line passes through the center of the base and cuts the pyramid, the apex being retained. Draw the top view, sectional front view, true shape of the section.

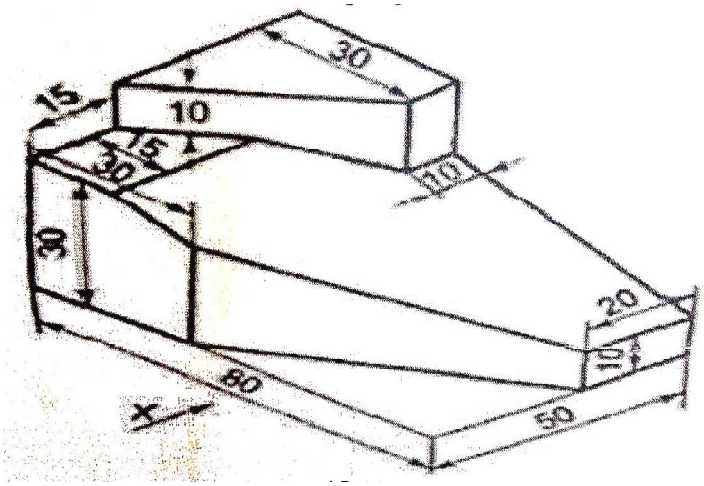
(OR)

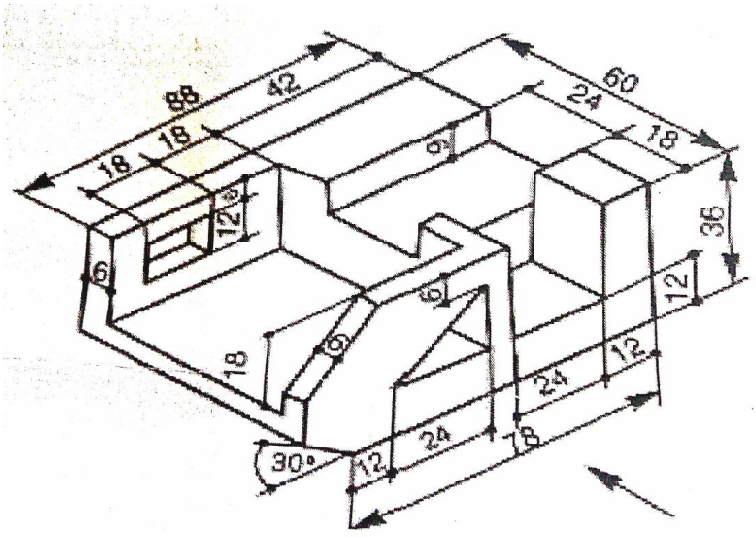
8. The isometric view is shown in the figure below. Draw the front view, top view and side view (looking from right). All dimensions are in mm.



UNIT - V

9. Draw the orthographic view of the following figure. All dimensions are in mm.



(OR)

10. Draw the front view, top view, side view of the followiong figure. All dimensions are in mm.