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ANNA UNIVERSITY OF TECHNOLOGY, COIMBATORE

B.E. / B.TECH. DEGREE EXAMINATIONS : DECEMBER 2010

REGULATIONS : 2008

FIRST SEMESTER

080120001 - ENGINEERING GRAPHICS

(COMMON TO ALL BRANCHES)

Time : 3 Hours Max.Marks : 100

ANSWER ALL QUESTIONS

PART – A

(10 x 2 = 20 Marks)

(Use free hand sketch wherever applicable)

1. What is a conic section? Enlist its various types.
2. Define Hyperbola.
3. Plot the position of the point, the front view of which lies 50 mm below the reference line and the top view 30 mm above the reference line .
4. What are apparent angles of Inclination?
5. Differentiate between frustrum of a pyramid and a truncated pyramid.
6. Compare isometric projection and isometric view
7. Why sectioning of solids are necessary?
8. Differentiate the parallel line and radial line development?
9. For a cone of base 50 mm and height 65 mm calculate the angle subtended by the arc at the centre for development of the cone.
10. Define picture plane in a perspective view.

PART – B

(2 x 16 = 32 Marks)

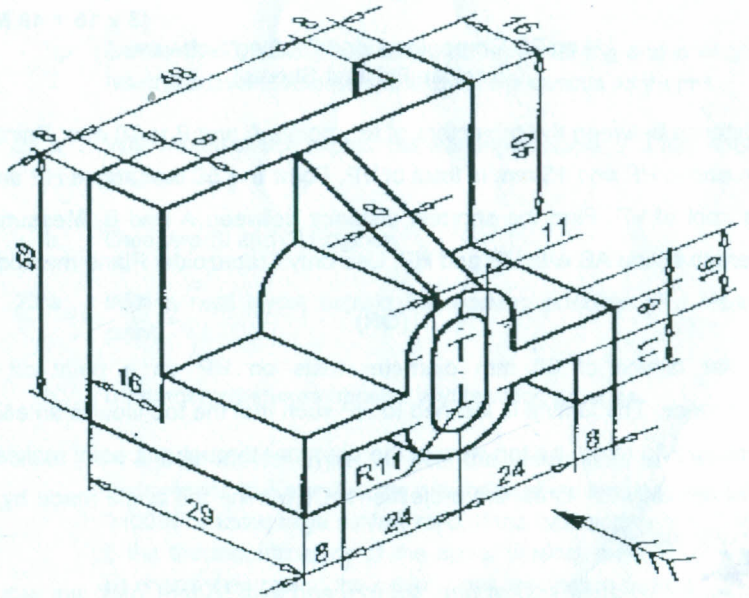
(Free hand sketch)

11. Construct an ellipse when the distance between the focus and the directrix is 30 mm and the eccentricity is ¾.

(OR)

12. An inelastic string of length 100 mm is wound round a circle of 26 mm diameter. Draw the trace of the end of the string.

13. Draw the Elevation, plan and both the side view of the given isometric view

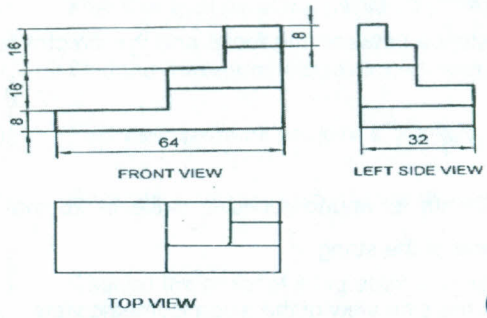


All Dimensions are in mm

(OR)

14. Draw the isometric view of the given orthographic views.

Contd...Q.No.14



(All Dimensions are in mm).

PART - C

(3 x 16 = 48 Marks)

Using 2D Computer Aided Drafting Software
(Enclose Printout Sheets)

15 The distance between the projectors of two points A and B is 70 mm. Point A is 10 mm above HP and 15 mm in front of VP. Point B is 50 mm above HP and 40 mm in front of VP. Find the shortest distance between A and B. Measure the True length of line AB with VP and HP. Use only Trapezoidal Plane method.

(OR)

16 A circular lamina of 60 mm diameter rests on HP on a point on the circumference. The lamina is inclined to HP such that the top view is an ellipse of minor axis 35 mm. The top view of the diameter through the point makes an angle of 45° with VP. Draw the projections. Determine the angle made by the lamina with the HP.

17 A pentagonal pyramid side of base 25 mm and axis 55 mm long, lies with one of its slant edges on HP such that its axis is parallel to VP. Draw its projections.

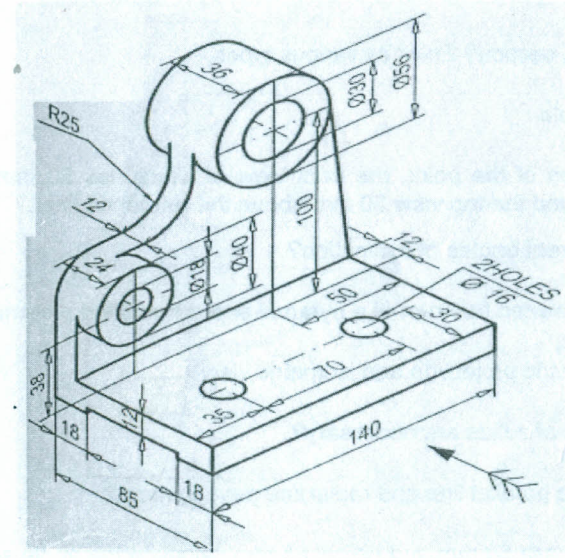
(OR)

18 A cone of base 40 mm diameter and axis 60 mm long rests with its base on HP. It is cut by a sectional plane perpendicular to VP, parallel to one of the generators and passing through a point on the axis at a distance of 25 mm from the apex. Draw the sectional top view.

19 A vertical section of a right circular cone through the axis is an isosceles triangle of 50 mm base 60 mm height. A bee sits on the extreme left end of the base and moves around the surface of the cone and returns to the starting point. Find graphically the length of the shortest path the bee can take. Show the path of the bee in the front and top views.

(OR)

20 Draw the Elevation, plan and both the side view of the given isometric view



All Dimensions are in mm

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