

**PRAGATI ENGINEERING COLLEGE: SURAMPALEM**  
**(AUTONOMOUS)**  
**I B.Tech I Semester Supplementary Examinations, July-2024**  
**ENGINEERING GRAPHICS**  
**(Common to CSE, CSE(AI&ML), CSE(AI)&CSE(DS))**

Time: 3 hours

Max. Marks: 70

**Answer ONE Question from each Unit**  
**All Questions Carry Equal Marks**

Q. No.	Questions	BTL	CO	Marks
<b>UNIT – I</b>				
1.	Construct a parabola using general method. Take focus length from the directrix as 50mm. Also draw a tangent and normal at any point on the curve.	K3	CO1	14M
<b>OR</b>				
2.	A circle of 40 mm diameter rolls on a flat surface for one revolution. Draw the cycloid. Also draw a tangent and normal at any point on the curve.	K3	CO1	14M
<b>UNIT – II</b>				
3.	Draw the orthographic projections of the following points on the same reference line, keeping the Projectors 20mm apart. (i) Point P is 30 mm. above H.P and 40 mm. in front of V.P (ii) Point Q is 25 mm. above H.P and 35 mm. behind V.P (iii) Point R is 32 mm. below H.P and 45 mm behind V.P (iv) Point S is 35 mm. below H.P and 42 mm in front of V.P (v) Point T is in H.P and 30 mm. is behind V.P (vi) Point U is in V.P and 40 mm. below H.P (vii) Point V is in V.P and 35 mm. above H.P (viii) Point W is in H.P and 48 mm. in front of V.P	K3	CO2	14M
<b>OR</b>				
4.	Draw the projections of a circle of 60 mm diameter resting on the ground on a point A on the circumference, its plane inclined at $45^\circ$ to the H.P. and the top view of the diameter AB making $30^\circ$ angle with the V.P.	K3	CO2	14M
<b>UNIT – III</b>				
5.	A Hexagonal pyramid, base 25mm side and axis 50mm long, has an edge of its base on the ground. Its axis is inclined at $30^\circ$ to the ground and parallel to the V.P. Draw its projections	K3	CO3	14M
<b>OR</b>				
6.	Draw the projections of a cone, base 75mm diameter and axis 100mm long, lying on the H.P. on one of its generators with the axis parallel to the V.P.	K3	CO3	14M
<b>UNIT – IV</b>				
7.	A cylinder of 50mm diameter and axis 75mm long, is resting on one of its bases on H.P. It is cut by a section plane, inclined at $50^\circ$ with H.P and passing through a point on the axis at 20mm from one end. Draw the three views of the solid and also obtain	K3	CO4	14M

the true shape of the section.

**OR**

- 8.

A cone, 45 mm base diameter and 60 mm axis is standing on its base on HP. It cut by a section plane  $50^\circ$  inclined to HP through base end of end generator. Draw projections, sectional views, true shape of section and development of surfaces of remaining solid.

K3

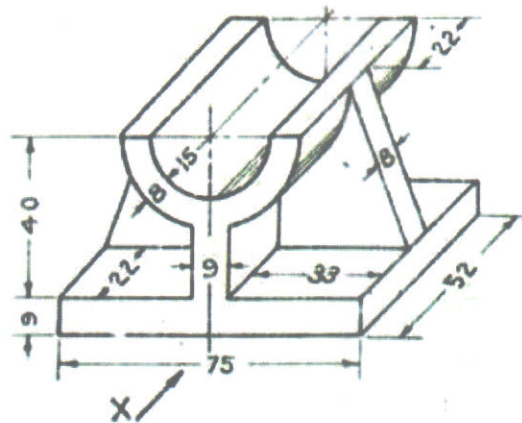
CO4

14M

UNIT – V

- 9.

Draw (i) Front View (ii) Side View from the right (iii) Top View as shown in figure



K3

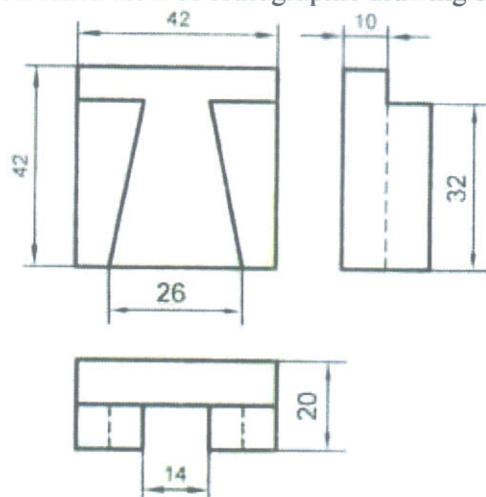
CO5

14M

**OR**

- 10.

Draw the isometric view of orthographic drawing shown below



K3

CO5

14M