

**PRAGATI ENGINEERING COLLEGE: SURAMPALEM
(AUTONOMOUS)**

I B.Tech II Semester Regular Examinations, June-2024

ENGINEERING GRAPHICS

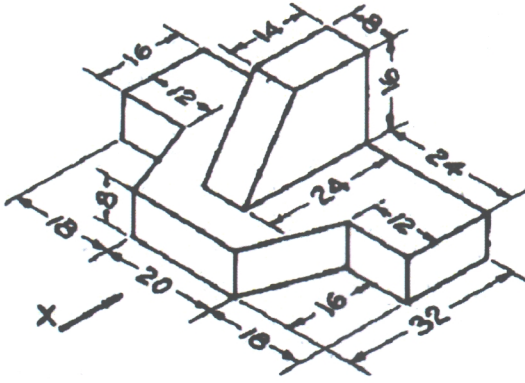
(Common to ECE-D & E Sections and CSE (CS))

Time: 3 hours

Max. Marks: 70

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

Q. No.	Questions	BTL	CO	Marks
UNIT – I				
1.	a) Construct a regular hexagon of side 25mm when one of its side is horizontal?	K2	CO1	4M
	b) Construct parabola with the distance from the focus to the directrix as 50mm. Draw a tangent and normal to the curve at a point 45 mm from the directrix.	K2	CO1	10M
OR				
2.	a) A circle of diameter 50 mm rolls on a flat surface without slipping. Trace the path of a point lying on its circumference for one clockwise revolution of the circle.	K3	CO1	7M
	b) Draw an involute of a regular pentagon of side 20 mm. Draw its tangent and normal at 80 mm of the centre of the pentagon.	K2	CO1	7M
UNIT – II				
3.	a) A point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25mm behind the V.P. and 40mm below the H.P. Draw the projections of P and Q keeping the distance between the end projectors equal to 90mm. Draw the straight lines joining (i) their top views and (ii) their front views.	K2	CO2	7M
	b) A 70 mm long line is parallel to and 40 mm above H.P. Its two ends are 25 mm and 50 mm in front of V.P. respectively. Draw its projections and find the inclination with the V.P.	K3	CO2	7M
OR				
4.	Draw the projections of a circle of 50 mm diameter resting in the H.P. on a point A on the circumference, its plane inclined at 45° to the H.P. and the top view of the diameter AB making 30° angle with the V.P.	K3	CO2	14M
UNIT – III				
5.	Draw the projections of the cylinder 75mm diameter and 100mm long, lying on the ground with its axis inclined at 30° to V.P. and parallel to the ground.	K3	CO3	14M
OR				
6.	Draw the projections of hexagonal prism of base 25 mm side and axis 60 mm long when it is resting on one of its corners of the base on H.P. The axis of the solid is inclined at 45° to the H.P.	K3	CO3	14M

UNIT – IV				
7.	A Pentagonal pyramid with side of base 30mm and axis 60mm long, is resting with its base on HP. And one of the edges of its base is perpendicular to VP. It is cut by a sectional plane parallel to HP and passing through the axis at a point 35mm above the base. Draw the projections of the remaining solid.	K3	CO4	14M
OR				
8.	A Cylinder of diameter of base 40mm and axis 55mm long is resting on its base on HP. It is cut by a section plane perpendicular to VP and inclined at 45° to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder.	K3	CO4	14M
UNIT – V				
9.	Convert the isometric view of the picture shown in the figure in to orthogonal projection of all three views.	K3	CO5	14M
				
OR				
10.	Draw the isometric view for the given orthographic projections as shown in the figure.	K3	CO5	14M
