Reg. No.																

Question Paper Code	13380

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2024 (JAN - 2025)

First Semester

Civil Engineering

(Common to All Branches)

24ESGE101 - ENGINEERING GRAPHICS

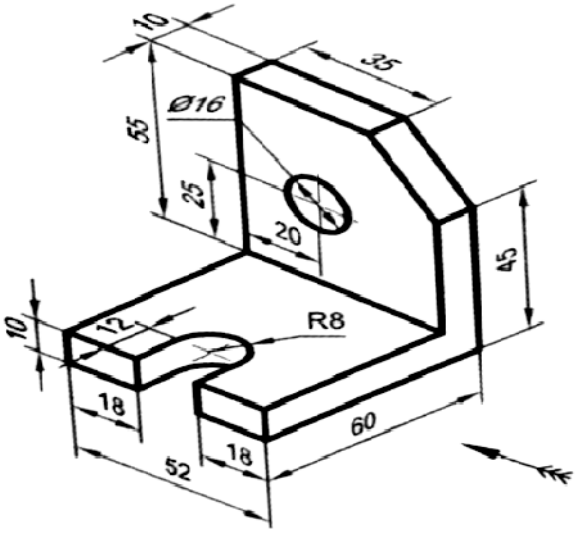
Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (5 × 17 = 85 Marks)

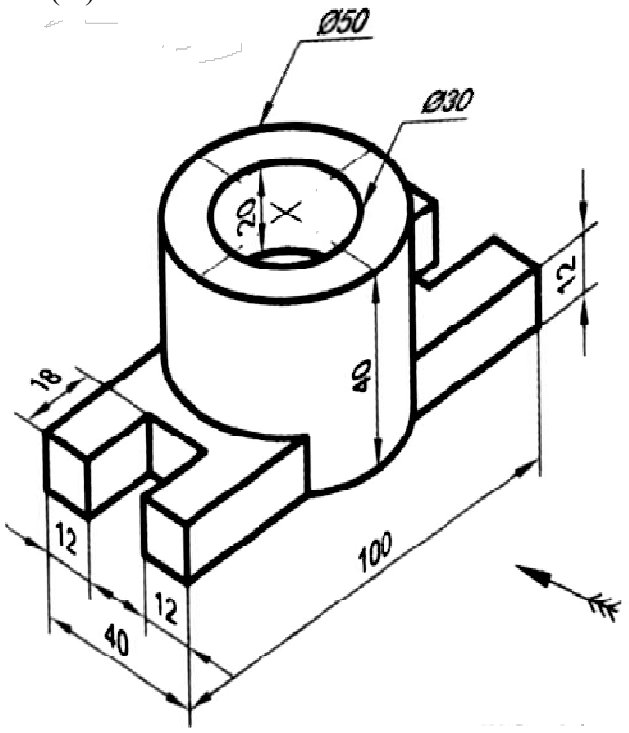
Answer ALL Questions

			Marks	K – Level	CO
1.	a)	The distance between the focus and directrix is 40 mm and the eccentricity is 1. (i) Draw a parabola (ii) Draw a tangent and normal at any point on the curve.	13+4	K3	CO1
		OR			
	b)	A circle of 40 mm diameter rolls along a straight line without slipping (i) Draw the curve traced by a point P on the circumference for one complete revolution (ii) Draw the tangent and normal at any point on the curve.	13+4	K3	CO1
2.	a)	A line CD measuring 80 mm is inclined at an angle of 30° to HP and 45° to VP. The point C is 20 mm above HP and 30 mm in front of VP. Draw its projections.	17	K3	CO2
		OR			
	b)	A thin rectangular plate of sides 50 mm x 25 mm has its shorter side in the HP. The surface is inclined at an angle of 45° to HP and perpendicular to VP. Draw (i) simple position of plane (ii) final projections of plane.	7+10	K3	CO2
3.	a)	A cylinder, base 30 mm diameter and axis 40 mm long, resting with a point of its base circle on HP such that the axis is making an angle of 30° with HP and parallel to VP. Draw the (i) simple position of solid (ii) final projections of solid.	7+10	K3	CO3
		OR			
	b)	A hexagonal pyramid of base side 30 mm and axis length 60 mm is resting on HP on one of its base corners with its axis inclined at 35° to VP and parallel to HP. The base sides containing the resting corner are equally inclined to HP. Draw the (i) simple position of solid (ii) final projections of solid.	7+10	K3	CO3
4.	a)	Draw the following orthographic views for the given isometric view (i) Front View (ii) Top View and (iii) Side View as viewed from the side available for viewing.	6+6+5	K3	CO4



OR

b) Draw the following orthographic views for the given isometric view (i) Front View (ii) Top View and (iii) Side View as viewed from the side available for viewing. *6+6+5* *K3* *CO4*



5. a) A cone, base 50 mm diameter and axis 65 mm long, rests with its base on HP. It is cut by a section plane perpendicular to VP, inclined at 45º to HP and passing through a point on the axis 35 mm above the base. Draw (i) sectional top view and (ii) true shape of section. *12+5* *K3* *CO5*

OR

b) A pentagonal prism, side of base 25 mm and altitude 50 mm, rests on its base on the HP such that an edge of the base is parallel to VP and nearer to the observer. It is cut by a plane inclined at 45° to HP, perpendicular to VP and passing through the center of the axis. Draw (i) simple position of solid and (ii)development of its lateral surface. *7+10* *K3* *CO5*

PART - B (1 × 15 = 15 Marks)

6. a) A hexagonal prism, side of base 25 mm and height 50 mm rests on HP and one of the edges of its base is parallel to VP. A section plane perpendicular to VP and inclined at 50° to HP bisects the axis of the prism. Draw (i) simple position of solid and (ii) isometric projection of the truncated prism, showing the cut surface. *5+10* *K3* *CO6*

OR

b) A cone of base diameter 50 mm and height 70 mm stands on HP with its base. It is cut by a cutting plane inclined at 30° to HP cutting the axis of the cone at a height of 40 mm from its base. Draw (i) simple position of solid and (ii) isometric view of the truncated portion of the solid. *5+10* *K3* *CO6*