Reg. No.															

Question Paper Code	**13662**

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2025

First Semester

Civil Engineering

(Common to All Branches Except CSBS)

20ESGE101 - ENGINEERING GRAPHICS

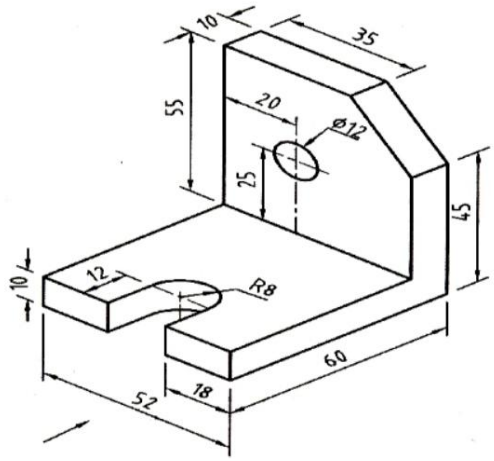
Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (5 × 20 = 100 Marks)

Answer ALL Questions

			Marks	*K – Level*	*CO*
1.	a)	Draw a hyperbola given the distance of the focus from the directrix as 50 mm and eccentricity as 1.5 and also draw a tangent and a normal at any point P on the hyperbola.	*20*	*K3*	*CO1*
		OR			
	b)	Draw free hand sketches of the front, top and side views of the block given below.	*20*	*K3*	*CO1*



All the dimensions are in mm

2.	a)	A line PQ, 80 mm long is inclined at 40° to the HP and 25° to the VP. Its end P is 15 mm below the HP and 20 mm behind the VP. The end Q is in the first quadrant. Draw its projections.	*20*	*K3*	*CO2*
		OR			
	b)	A hexagonal plate of side 25 mm rests on the HP on one of its sides inclined at 45° to the VP. The surface of the plate makes an angle of 30° with the HP. Draw the front and top views of the plate.	*20*	*K3*	*CO2*
3.	a)	A cylinder of diameter 25 mm and axis length 50 mm is resting on the HP on a point so that axis inclined at 45° to the HP and parallel to the VP. Draw its projections.	*20*	*K3*	*CO3*
		OR			
	b)	A pentagonal pyramid of base edge 35 mm and altitude 80 mm rests on one of its base edges on the HP with its axis inclined at 30° to the HP and parallel to the VP. Draw its plan and elevation.	*20*	*K3*	*CO3*
4.	a)	A hexagonal prism of base 30 mm and axis 60 mm rests on its base on HP with its axis perpendicular to HP and one of the base edge parallel to VP. The solid is cut by a plane which is perpendicular to VP, inclined at 40° to HP and bisecting the axis of the prism. Draw the sectional top view and true shape of the section.	*20*	*K3*	*CO4*
		OR			

	b)	A right circular cone of base diameter 50 mm and height 70 mm is resting on its base on the ground. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The cutting plane bisects the axis of the cone. Draw development of lateral surface of the truncated cone.	*20*	*K3*	*CO4*
5.	a)	A pentagonal prism of base 25 mm side and height 50 mm rests on one of its ends on the HP. the two base sides of the prism are equally inclined to the VP. It is cut by a plane perpendicular to the VP and inclined at 45° to HP that passes through a point on the axis 10 mm from the top. Draw isometric view of the prism.	*20*	*K3*	*CO5*
		OR			
	b)	Draw the perspective view of a square prism of base side 25 mm and height 40 mm resting on an end on the ground with a rectangular face parallel to the picture plane. The axis of the prism is 30 mm behind the PP and 30 mm to the right of the eye. The eye is 50 mm in front the PP and 50 mm above the ground.	*20*	*K3*	*CO5*