16/8/23

Reg. No.													

Question Paper Code	12141

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023

First Semester

Civil Engineering

(Common to All Branches except Computer Science and Business Systems)

20ESGE101 - ENGINEERING GRAPHICS

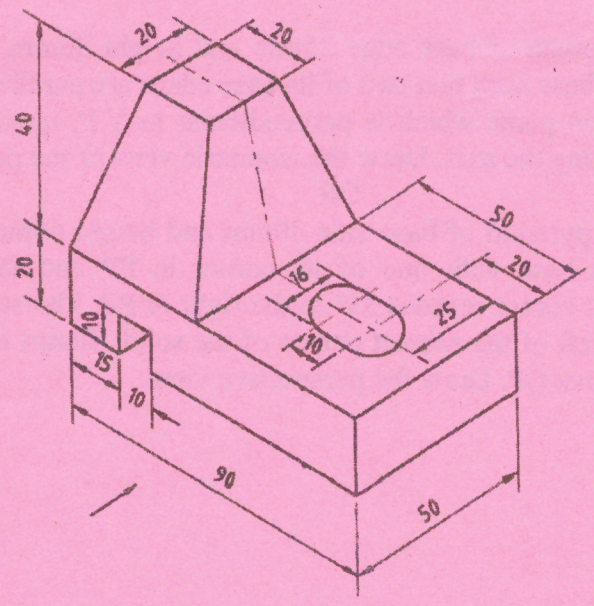
(Regulations 2020)

Duration: 3 Hours Max. Marks 100

PART - A (5 × 20 = 100 Marks)

Answer ALL Questions

			Marks, K-Level,CO
1.	a)	Draw the conic section when the distance of the fixed point from the fixed line is 50mm and the eccentricity is 2/3. Also, draw tangent and normal at any point on the curve.	*20,K1,CO1*
		OR	
	b)	Draw by freehand the front view, top view and side view of the object shown below	*20,K1,CO1*



2.	a)	A straight-line AB of length 100mm has its end A 10mm in front of VP and B 20mm above HP. The front view and top view of the line measure 80mm and 60mm respectively. Draw the projections of the line and obtain the true angles of inclination with HP and VP.	*20,K2,CO2*

OR

b) A hexagonal plate of side 20 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 hexagonal plate. *20,K2,CO2*

3. a) A pentagonal prism of base edge 50mm and the axis height of 80mm is resting on H.P on one of its corners of its base such that the longer edge contained by that corner is inclined 30° to H.P and parallel to V.P. Draw its projections *20,K2,CO3*

OR

b) A cone of base diameter 60mm and axis height 75mm is resting on V.P on one of its generators such that axis parallel to H.P. Draw its projections. *20,K2,CO3*

4. a) A vertical cone of diameter 40mm, height 65mm is cut by a cutting plane perpendicular to H.P and inclined at 40° to V.P, passing through a point 10mm away from the axis. Draw sectional elevation and true shape of the section. *20,K3,CO*

OR

b) A cylinder of diameter 40mm and axis height 60mm is cut by a plane inclined at 60° to the H.P and bisecting the axis. Draw the lateral development. *20,K3,CO4*

5. a) A hexagonal prism of base edge 25mm and height 50mm is resting on the H.P on its base such that two of its base edges are parallel to V.P. It is cut by a section plane which is perpendicular to V.P, inclines at 45° to H.P and bisecting the axis. Draw the isometric view of the prism. *20,K3,CO5*

OR

b) A pentagonal pyramid of base side 30mm and height 65mm rest on the ground on its base with one of its corner in PP and the base edge containing that corner recedes 35° to the right of PP. The station point is 10mm to the left of the nearest corner of the solid, 50mm in front of PP and 75mm above GP. Draw the perspective view. *20,K3,CO6*