Reg. No.													

Question Paper Code	11754

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022 (MARCH 2023)

First Semester

Artificial Intelligence and Data Science

(Common to all branches except Computer Science and Business Systems)

20ESGE101 - ENGINEERING GRAPHICS

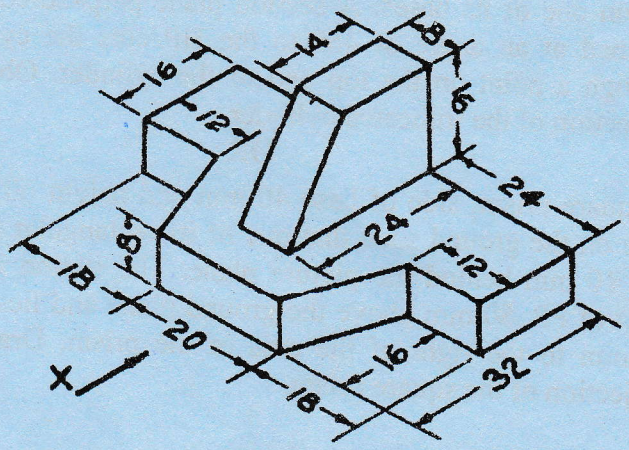
(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (5× 20 = 100 Marks)

Answer all Questions

			Marks, K-Level,CO
1.	a)	Identify & construct the conic curve when the distance between the focus and directrix is 45 mm and eccentricity is 5/4. Also draw the tangent and normal to any point on the curve.	20,K2,CO1
		OR	
	b)	The Pictorial view of an object is shown in Figure. Draw the elevation in the direction of arrow, Right end elevation, plan. Use free hand sketching technique.	20,K2,CO1



All the dimensions are in mm

2.	a)	A line PQ 70 mm long has its end P 35 mm above HP and 30 mm in front of the VP. Its top view and front view measured 45 mm and 60 mm respectively. Draw the projections of PQ and list out the line inclinations, view inclinations, distance between the end projectors.	20,K2,CO2

OR

b) A square lamina of 40 mm side rests on one of its sides on HP. The lamina makes 30° to HP and the side on which it rests makes 45° to VP. Draw its projections. *20,K2,CO2*

3. a) A pentagonal prism of base side 30mm and axis length 70 mm is resting on HP with one of its edges on base is perpendicular to VP and the axis inclined at 45° to HP. Draw its projections. *20,K2,CO3*

OR

b) A cylinder of base 50 mm and height 70 mm is resting on HP. The base is inclined at 50° to HP. Draw its projections. *20,K2,CO3*

4. a) A square pyramid of base side 30 mm and axis length 70 mm is resting on HP and axis parallel to VP, with all of its edges on base is equally inclined to VP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the pyramid. Draw sectional top view and true shape of section. *20,K2,CO4*

OR

b) A hexagonal prism of base side 30 mm and axis 60 mm is resting on HP on one of its bases with two of the vertical faces perpendicular to VP. It is cut by a plane inclined 30° to HP and perpendicular to VP at a distance of 25 mm from the right top end. Draw the development of the lateral surface of the remaining portion of the prism. *20,K2,CO4*

5. a) A cylinder of 50 mm diameter and 60 mm axis length is resting on the HP on one of its bases. A section plane perpendicular to the VP and inclined at an angle of 45° to the HP cuts the cylinder and passes through a point on the top end of the cylinder. Obtain the isometric projection of the truncated cylinder. *20,K3,CO5*

OR

b) A square prism, side of base 40 mm and height 60 mm rests with its base on the ground such that one of its rectangular faces is parallel to and 10 mm behind the picture plane. The station point is 30 mm in front of PP, 80 mm above the ground plane and lies in a central plane 45 mm to the right of the axis of the prism. Draw the perspective projection of the square prism. *20,K3,C*