Reg. No.															

Question Paper Code	12548

B.E. / B.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2023

First Semester

Civil Engineering

(Common to All Branches)

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)	Construct a Parabola, given the distance of the focus from the directrix is 40mm. The distance between vertex to focus and vertex to directrix are equal.	*20,K3,CO1*
		OR	
	b)	Draw the front, top and Left side view of the block given below using free hand sketching. Note: All Dimensions are in "mm".	*20,K3,CO1*

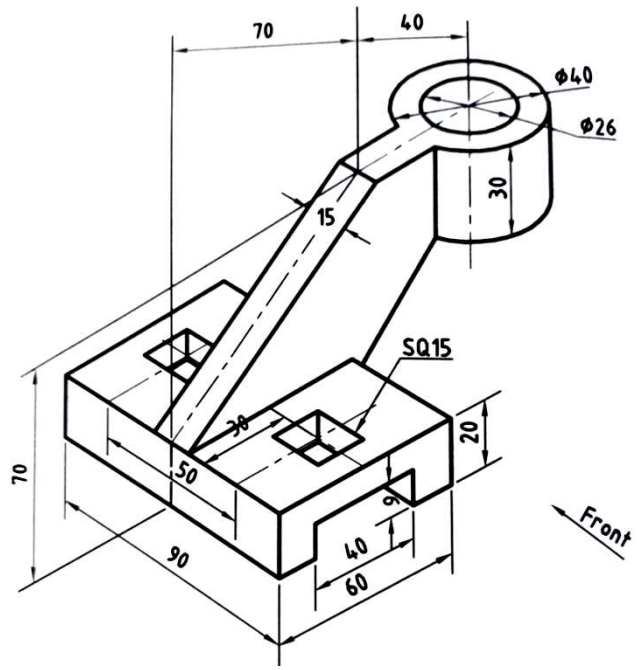

Fig. 1

2. a) A line AB 75 mm long has its end A in both HP and VP. The line is inclined at 30° to VP and 45° to HP. Draw its projections. *20,K3,CO2*

OR

b) Draw the projections of a circle of 50 mm diameter resting on the HP on a point A of the circumference. Such that the top view of the plane is an ellipse of minor axis 30 mm. The diameter through the point A is making an angle of 45° with the VP. Draw the projections of the plane. *20,K3,CO2*

3. a) A hexagonal prism of base side 25 mm and axis length 60 mm is resting on HP on one of its base corner such that its axis is inclined at 40° to HP. Draw its projection. *20,K3,CO3*

OR

b) A cone of base diameter 40 mm and axis length 60 mm is resting on VP on a point on the circumference of the base with its axis inclined at 40° to VP and parallel to the HP. Draw its projection. *20,K3,CO3*

4. a) A Pentagonal pyramid has a base side of 20 mm and altitude 60 mm. It rests with its base on HP such that one of the base edges is perpendicular to VP. The pyramid is cut by a plane which bisects the axis and is inclined at 45° to HP. Draw the front view, sectional top view and true shape of the section. *20,K3,CO4*

OR

b) A cylinder of base diameter 30 mm and height 60 mm rests on its base on the ground. A cutting plane inclined at 50° to H.P. and meeting the axis at 35 mm from the base. Draw the development of the lateral surface of truncated cylinder. *20,K3,CO4*

5. a) A Hexagonal prism of base side 20 mm and axis length 55 mm is resting on HP on its base, one of its rectangular faces is parallel to VP. A Cutting plane passes through the solid at an angle of 45^{o} to HP at 20 from the top. Draw its isometric projection. *20,K3,CO5*

OR

b) A square pyramid of 25 mm side of base and height 50 mm rests with its base on the ground such that one of the triangular face is parallel to the picture plane and 10 mm behind it. The station point is 50 mm in front of the picture plane, 45 mm to the left of the axis of the solid and 70 mm above the ground plane. Draw the perspective projection of the square pyramid. *20,K3,CO5*