Roll No. | | | | | | | | | | |

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E / B. Tech (Full Time) END SEMESTER EXAMINATIONS – MAY 2025

DEPARTMENT OF MECHANICAL ENGINEERING

I Semester

GE3155 ENGINEERING DRAWING

(Regulation 2023)

Time: 3 Hours | Max. Marks 100

PART- A (5 x 20 = 100 Marks)

Answer all the Questions

#	Questions	Marks	CO	BL
1.	a) A fixed point F is 80 mm from a fixed straight line. Draw the locus of a point P moving in such a way that its distance from the straight line is equal to its distance from F. Name the curve. Draw the normal and tangent at any point on the curve.	20	1	3
	OR			
	b) Trace the path of the end point of a cable unwinding itself from a drum of 50 mm diameter, such that the unwound cable is taut during unwinding. Draw a tangent and normal at any point on the curve.	20	1	3
2.	a) A line AB of true length 67 mm has its end point A 50 mm above HP and 50 mm infront of VP and its another point B 22 mm above HP and 28 mm infront of VP. Draw its projections and find the true and apparent inclinations.	20	2	3
	OR			
	b) A pentagon of side 25 mm rests on the ground on one of its corners with the sides containing the corner being equally inclined to the ground. The surface of the pentagon makes 50° with the ground. The side opposite to the corner on which it rests is inclined at 30° to the VP and is parallel to the HP. Draw the top and front views of the pentagon.	20	2	3
3.	a) Draw the projections of a rectangular pyramid of 40 mm x 25 mm sides of base and 40 mm height which rests on one of its larger edge of the base on HP such that the triangular face containing that edge is inclined at 60° HP and the top view is inclined 50° to VP.	20	3	4
	OR			

#	Questions	Marks	CO	BL
	b) Draw the free hand sketch of Top, Front, and side views of the part shown in figure 1: *(All dimensions are in mm)*	20	3	4

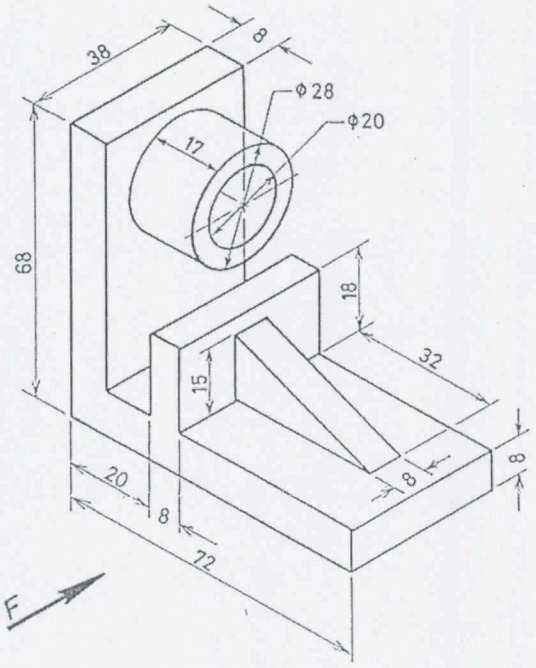

Figure 1 A mechanical part

4.	a) A cone of base circle diameter 40 mm and axis length 60 mm resting on HP by its base. It is sectioned by a plane passing through a point located 15 mm from the axis. The section plane is inclined by 50° with VP and perpendicular to HP. Draw the sectioned top view, sectioned front view, and true shape of the section.	20	4	4
	OR			
	b) A hexagonal prism of base side 30 mm and length 80 mm resting on HP by its base such that two of its base sides are parallel to VP. It is sectioned by a plane bisecting the axis and inclined by 30° to HP and perpendicular to VP. Develop the lateral surface of the prism.	20	4	4
5.	a) A cylindrical disc of base diameter 80 mm and thickness 20 mm is placed on HP by its base. A cube of side 40 mm is placed on the face of the disc such that one of the square faces of the cube is parallel to VP. The centers of gravity of both solids are collinear. Draw the isometric view of this combination.	20	5	4
	OR			
	b) A square prism of 40 mm side and 60 mm length is lying on the ground plane on one of its square faces, in such a way that one of its rectangular faces is parallel to and 10 mm behind the picture plane. The observer is looking the prism from a point which is 40 mm infront of the PP and 80 mm above the ground plane. The central plane is 50 mm away from the axis of the prism towards the left. Draw the perspective projection of the prism.	20	5	4