

B.E / B.TECH. DEGREE EXAMINATION, MAY 2023

First & Second Semester
GE18151 – ENGINEERING DRAWING
(Common to all branches)
(Regulation 2018 & 2018A)

TIME: 3 HOURS
100

MAX. MARKS:

- CO 1** Students will construct conic sections and curves and sketch the orthographic views of lines as per drawing standards.
- CO 2** Obtain orthographic projections of plane surfaces and simple solids in various positions.
- CO 3** Draw projections of sectioned solids and develop the lateral surfaces of simple solids.
- CO 4** Draw isometric projections of simple solids and their combinations. Also perform free hand sketching of orthographic views of given objects.
- CO 5** Draw perspective projections for the given objects in different positions

PART- B (5 x 18 = 90 Marks)

	Marks	CO	RBT LEVEL
1(a) A wheel of 50 mm diameter rolls on a surface without slipping. Draw the locus of the point A which is on the circumference of the circle for one complete revolution. Name the curve and draw the tangent and normal at any point on the curve.	(18)	1	3
(OR)			
1(b) A straight line 70 mm long has one end 15 mm in front of VP and 50 mm above HP, while the other end is 35 mm in front of VP and 20 mm above HP. Draw the front view and top view of the line.	(18)	1	3
2(a) An equilateral triangular plate of side 60 mm is resting on the HP on one of its side. Draw its projections when its top view is an isosceles triangle of side 60 X 40 mm and also find the angle of inclinations of the plate with respect to HP.	(18)	2	3
(OR)			
2(b) Draw the projections of the square pyramid of side 40 mm and axis length 80 mm resting on the HP on one of its slant edges and its axis is parallel to VP	(18)	2	3

- 3(a)** A pentagonal pyramid of base side 20 mm and axis length 55 mm is resting on HP on its base with one of the base edges perpendicular to the VP. It is cut by a plane inclined at 50° to the base. The cutting plane meets the axis at 15 mm above the base. Draw the front view, sectional top view and true shape of the section. (18) 3 3

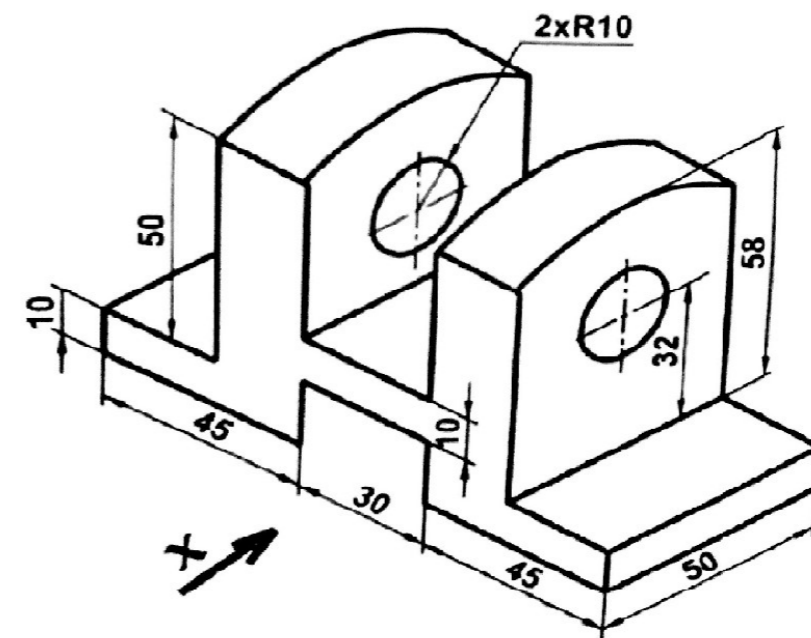
(OR)

- 3(b)** A pentagonal prism of base side 25 mm and height 50 mm is resting on the HP on its base in such a way that one of its base side is parallel to VP and away from it. It is cut by a cutting plane inclined at 40° to the HP and perpendicular to the VP in such a way that the cutting plane meets the solid axis at a distance of 30 mm from the base. Draw the development of the lateral surface of the truncated prism. (18) 3 3

- 4 (a)** Draw the isometric view of a frustum of a cone of height 30 mm, base diameter 35 mm, top diameter 20 mm when it is centrally placed over a square slab of side 50 mm and thickness 10 mm. (18) 4 4

(OR)

- 4(b)** Draw the front view, top view and right-side view for the figure shown below. (18) 4 4



5(a) A square prism of base 25 x 25 mm and height 40 mm rests on the GP on one of its ends with a rectangular face receding away from the PP towards right making 60° with PP. The corner nearest to the PP is 40 mm to the left of the station point and 20 mm behind the PP. The station point is 60 mm above the GP and 50 mm in front of the PP. Draw the perspective view of the prism.

(18) 5 5

(OR)

5(b) A frustum of a square pyramid of base edge 25 mm, top edge 20 mm and height 35 mm rests on its base on the ground with base edges equally inclined to the PP. The axis of the frustum is 30 mm to the right of the eye. The station point is 45 mm in front of the PP and 50 mm above the ground. The nearest base corner is 10 mm behind the PP. Draw the perspective projection of the frustum.

(18) 5 5

PART- C (1 x 10 = 10 Marks)
(Q.No.6 is compulsory)

Marks CO RBT LEVEL

6 A rectangular ventilator measuring 1000 mm X 600 mm is hinged on of its longer edges on a vertical wall. The ventilator is opened through an angle of 30° to the wall. Draw the projection of the ventilator.

(10) 2 4
