Subject Code:23ES1T04

BONAM VENKATA CHALAMAYYA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)

I - B. Tech I-Semester Regular/Supplementary Examinations (BR23), Jan- 2026

ENGINEERING GRAPHICS (CSE)

Time: 3 hours Max. Marks: 70M

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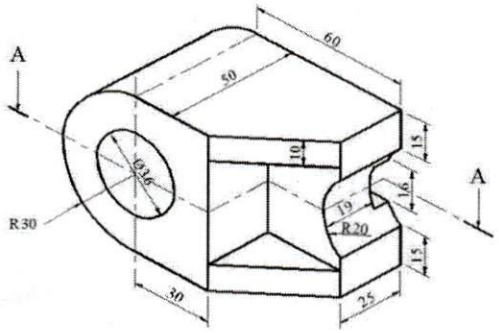
*Answer **ALL** the questions*

PART–A (5X14 = 70M)

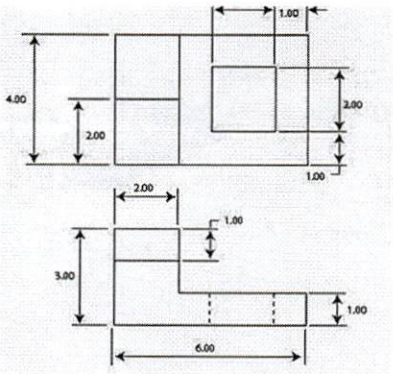
		Marks	CO	BL
1.	(a) Draw a line 60 mm long and divide it into 7 equal parts.	3(M)	C114.1	BL1
	(b) Construct a triangle having one side 45 mm. Draw the inscribed circle method	6(M)	C114.1	BL2
	(c) Construct a regular octagon having one side 30 mm using arc method.	5(M)	C114.1	BL3
	(OR)			
2)	(a) Draw a hyperbola having the distance between foci as 80 mm and eccentricity 1.5. Locate 8 points on the curve.	9(M)	C114.1	BL2
	(b) Construct a vernier scale to read millimetres and half millimetres with R.F = 1:1, to measure up to 100 mm. Show readings of 67.5 mm and 84.5 mm.	5(M)	C114.1	BL3
3)	a) Point A is 40 mm below HP and 30 mm in front VP and Point B is 30 mm below HP and 40 mm in front of VP. Draw the views of the straight line connecting these points in space, if (i) Their projectors lie on the same plane. (ii) Their projectors are 40 mm apart.	8(M)	C114.2	BL3
	(b) A line PQ, 55 mm long, has end P at 20 mm above HP and 15 mm in front of VP. End Q is 40 mm above HP and 50 mm in front of VP. Draw the projections and measure the projected lengths.	6(M)	C114.2	BL2
	(OR)			
4)	A Pentagon of side 30 mm has one of it's side on the HP and the plane is inclined at 30^0 to the HP.	14(M)	C114.2	BL5
5)	(a) A triangular prism, base edge 30 mm and height 50 mm, is resting on its base on HP. One rectangular face makes 45° with VP. Draw the projections and mark all visible edges clearly.	8(M)	C114.3	BL2
	(b) A square pyramid, base edge 40 mm and height 65 mm, has its base on HP. The pyramid is tilted about one base edge until one triangular face becomes perpendicular to VP. Draw the new projections.	6(M)	C114.3	BL3
	(OR)			
6)	A cone, base diameter 50 mm has it's base point on the HP and inclined at 45^0 to the HP.	14(M)	C114.3	BL5
7)	(a) Draw a pentagonal prism, base edge 25 mm and height 40 mm, resting on its base on HP. Mark the cutting plane perpendicular to VP and inclined at 50° to HP, passing through the axis at 20 mm from base.	3(M)	C114.4	BL1

	(b) Complete the sectioning of the above prism. Draw sectional front view, sectional top view, and show the true shape of the section. Label all section points clearly.	6(M)	C114.4	BL2
	(c) Develop the lateral surface of the truncated prism obtained above using parallel line method. Show all fold lines.	5(M)	C114.4	BL3
	(OR)			
8)	a) Draw the development of the lateral surface of cone having a base diameter 40mm and axis length 70 mm.	7(M)	C114.4	BL2
	b)Draw the development of the lateral surface of a right square prism of edge base 25 mm and axis 60 mm long.	7(M)	C114.4	BL2
9)	Below figure is an isometric view of a component. Draw the front and top views. All dimensions are in mm.	14(M)	C114.5	BL6



(OR)

10)	Draw the isometric view of the object shown in the orthographic projections below: (All Dimensions are in cm)	14(M)	C114.5	BL3



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