	Q.P. Code: 20ME0301b	<b>R20</b>	Q.P. Code
	Reg. No:		
	e all dimensions are in "mma".		
	SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUT	ГUR	
	(AUTONOMOUS)		
	<b>B.Tech I Year II Semester Regular Examinations November-2021</b>		
	ENGINEERING GRAPHICS		
	(Common to CE, AGE, CSE (AI & ML) & CSE (IoT & CS Including BCT))		
	Time: 3 hours	Max. M	larks: 60
	(Answer all Five Units $5 \times 12 = 60$ Marks)		
	Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as 2/3. Also draw normal and tangent to the curve at a point 35 mm from the directrix.	L3	12M
	OR		
,	Draw an Epi-cycloid of rolling circle of diameter 40 mm which rolls outside another circle (base circle) of 150 mm diameter for one revolution and construct a tangent and normal at any point on the curve.	t L3	12M
	UNIT-II		
	A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured parallel to XY, is 75mm. Draw the projections of the points. Draw lines joining their FVs and TVs.	3 <b>L1</b> f	12M
	<b>UR</b> A line AD 50mm long has its and A sway from the UD and VD then and D. The line it	. 17	1384
	A line AB Johnn long, has its end A away from the HP and VP than end B. The line is inclined to the HP at $30^{\circ}$ and to the VP at $45^{\circ}$ . Draw the projections if end A is 35mm above the HP and 50mm in front of the VP	5 L3 1	1.2111
	UNIT-III		
	A regular hexagonal plane of 30 mm side has a corner on HP, and its surface is inclined at $45^{\circ}$ to HP. Draw the projections, when the diagonal through the corner which is on HP makes $30^{\circ}$ with VP.	s L3	12M
	OR	2	
	A cylinder of base diameter 50 mm and axis 70 mm has a generator in the VP and inclined at 45 <sup>°</sup> to the HP. Draw its projections.	1 L3	12M
		1	1.0.7.5
	A cube of side 40 mm is resting on HP on one of its faces, with a vertical face inclined at $30^{\circ}$ to VP. It is cut by a section plane inclined at $45^{\circ}$ to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and also show the true shape of the section.	1 <b>L3</b> 5	121/1
	OR A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section	n L3	12M
	plane perpendicular to VP and inclined at $30^{\circ}$ to HP ,bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone.	V	
	UNIT-V		
(	Draw the isometric view of a cone of base diameter 50mm and axis 60 mm. The cone has its base on (a) HP (b) VP	L3	12M

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OR 10 Draw three views of the blocks shown pictorially in figure according to first angle L3 12M projection. Assume all dimensions are in 'mm'.



Construct an ellipse, with distance of the ficers from the directory as 50 mm and 4.3 and 6. Second 4.3 the directory is 2.3 and 6. Second and 6. Second 4. Second 4.

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- 2 Draw an Epi-cycloid of rolling citcle of diameter 40 mm which rolls outside another L3 12M circle (base circle) of 150 mm diameter for one revolution and construct a tangent and normal at any point on the curve.
- A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 1.1 12M 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured pacallel to XY, is 75mm. Draw the projections of the points. Draw lines foining their FVs and TVs.
  - A line AB 50mm long, has its end A away from the HP and VP than end B. The line is 1.3 12M inclined to the HP and 50° and to the VP at 45°. Draw the projections if end A is 35mm above the HP and 50mm in front of the VP.

# III-TIVO

A regular bexagonal plane of 30 mm side has a corner on HP, and its surface is 1.3 12M inclined at 45<sup>0</sup> to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 30<sup>0</sup> with VP.

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5 A cylinder of base districter 50 mm and axis 70 mm has a generator in the VP and L3 12M inclined at 45<sup>0</sup> to the HP. Draw its projections.

## VI-TINO

- A cube of side 40  $\mu$ m is resting on BP on one of its faces, with a vertical face inclined **L3** 12M at  $30^{9}$  to VP. It is cut by a section plane inclined at  $45^{9}$  to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and also show the true shape of the section.
- A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section 1.3 12M plane perpendicular to VP and inclined at 30° to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone.

### V-TIN

Draw the isometric view of a cone of base diameter 50mm and axis 60 mm. The cone ~ 4.3 12M has its base on (a) HP (b) VP.