Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058, India
(An Autonomous Institute Affiliated to University of Mumbai)

ESE	
29TH AUGUST, 2021	
Max. Marks: 60	**Duration:** 2 Hr. 10 Min.
Class: F.E. (C&D)	**Semester**: II
Course Code: AS104	**Branch:** IT & COMP
Name of the Course: Engineering Graphics	
Instructions:	
(1) All questions are compulsory. **Give all dimensions in the solution, it carries weightage**.	
(2) Draw solutions on A3 size drawing paper using drawing instruments and upload the solutions in single pdf format	
1. Write Your UID, Name and Page Number on each page (Use Ball Point pen). Its compulsory. 2. PDF should be clear, pages are in series and upload on or before time. It should be in landscape. 3. Late Submission will be evaluate as per rules. 4. PDF should be free from any shadow, and full A3 size page with proper cropping should upload. 5. Use standard File name format. 2020300011_ESE_NAME.pdf 6. Assume suitable data if necessary.	

Q. No.		**Max. Marks**	**CO-BL-PI**
Q.1	A thread of 120 mm length is unwinding from the circle of diameter 60 mm. Draw the curve of the end point of thread started unwinding from the top of the circle in anticlockwise direction, keeping it tight. Also draw the tangent and normal to the point on the curve 90 mm from the center of circle.	15	**CO1**-3-1.3.1
Q.2	Draw the cycloid of 68 mm diameter of a circle for a point initially at the top of the circle. Also draw tangent & normal to the curve at 35mm above the rolling surface.	12	**CO1**-3-1.3.1
Q.3	a) The line PQ has its end P 10mm from HP and 30mm from VP and is in forth quadrant. Line is inclined 30^0 to HP and 50^0 to VP. The distance between end projector is 90mm, draw the projection of line if Q is in second quadrant.	8	**CO3**-3-1.3.1

	b) A line AB of length 90mm, its end A is 20mm above HP and 20 mm in front of VP. If its elevation length measures 70 mm and top view measures 80 mm, draw the projection of line and find inclination with both planes.	7	
Q.4	a) A pentagonal pyramid side of base 30 mm axis height 65mm is resting on its apex in HP such that its one of the edge of base is in VP. Draw the projection of pyramid if the axis is 40^0 inclined to HP. **OR** Draw the projections of a pentagonal prism of base side 30mm and axis 70mm long. If it is resting on one of its corner of base in VP, such that the axis is 40^0 and 30^0 inclined to HP and VP respectively.	9	**CO4**-3-1.3.1 **CO4**-3-1.3.1
	b) A tetrahedron of 70mm long edge is resting on one of its edges on VP such that a triangular face containing that edge appears as right-angle triangle in front view. Draw the projections of the tetrahedron when the edge on VP is inclined to HP at 45°. **OR** A hexagonal pyramid, side of base 40mm and axis length 80mm is kept on HP, on edge of its base, such that its base is inclined 30^0 to HP and the side on which it rest is 45^0 inclined to VP. Draw the projection of pyramid if apex is in VP.	9	**CO4**-3-1.3.1 **CO4**-3-1.3.1

****BEST OF LUCK****