SARDAR VALLABHBHAI PATEL INSTITUTE OF TECHNOLOGY, VASAD
MCEHANICAL ENGINEERING DEPARTMENT
4th TEST – ENGINEERING GRAPHICS & DESIGN (3110013)
FY –1st SEMESTER (COMP & IT) – ACADEMIC YEAR 2021-22
TOTAL MARKS: 15 TIME: 50 minutes Date: 10/02/2022

		Marks	Mapping	
			CO (Course Outcome)	Cognitive Level (As per Revised Bloom's Taxonomy)
Q. 1	A cone of diameter of base 60mm and height 90mm is resting on HP on the point of periphery of the base. Axis of the cone makes 60 degree with the HP and 30 degree with the VP. Draw the projections of the cone when the apex is nearer to the VP. **OR**	**7**	**CO4**	**U, N, E**
Q. 1	A cylinder, diameter of base 43mm and height 58mm is resting on HP on its base. It is cut by an AIP in such a way that the true shape of section is an ellipse with major axis 60mm and minor axis 43mm. Find the inclination of AIP with HP and draw three projections.	**7**	**CO4**	**U, N, E**
Q.2 (a)	A cone of base 40mm diameter and height 50mm is cut by a cutting plane perpendicular to VP and inclined at 30 degree to HP and bisecting the axis of the cone. Draw the development of the cone.	**4**	**CO5**	**N, E, C**
Q.2 (b)	A square pyramid edge of base 40mm and axis length 70mm stands with its base on HP with two sides of base parallel to VP. It is cut by an AIP inclined at 60 degree to the HP and passing through a point on axis 40mm from the base. Draw the development of pyramid removing the portion containing apex. **OR**	**4**	**CO5**	**N, E, C**
Q.2 (a)	Draw the projections of a cube of side 40mm rests on one of its corners on HP with solid diagonal parallel to HP and perpendicular to the VP. Draw its projection.	**7**	**CO4, CO5**	**N, E, C**
Q.2 (b)	List the different applications of a development of surfaces.	**1**	**CO4, CO5**	**R, A**

- **Course Outcomes (COs)**

CO-1	To understand the different projection systems. i.e. 1st angle system & 3rd angle system and the difference between them.
CO-2	To know how to obtain orthographic & isometric projections of an object.
CO-3	To understand the loci & applications of different Engineering Curves.
CO-4	To understand the application of projections of points, lines, planes & solids for real life objects.
CO-5	To understand the effect of surface inclination with principle planes on projections of a plane & development of surfaces.
CO-6	To get familiar with designing softwares like AutoCAD.

- **Legends:** R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate, C: Create (Revised Bloom's Taxonomy)