R20 Regulation *Subject code: 3E1AE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A' Grade)

B.Tech I Semester Regular/Supplementary Examinations, April 2022

Engineering Graphics

(Common to CSE(AI&ML) and IT)

Maximum Marks: 70 Date: 10.05.2022 Duration: 3 hours

Answer All the following questions. (14M X 5=70Marks)

1. A circle of 40 mm diameter rolls on a straight line for Half revolution and for the remaining Half on vertical line draw the curve traced by a point P on circumference of the circle taking the top most point on the revolving circle as the initial position of the generating point.

(OR)

2. A Fixed point is at a distance of 50mm from fixed straight line trace the path of the curve if e =3/2. Draw tangent and normal to it at a dist. of 40mm from directrix.

3. The Front view and Top view of a straight-line PQ measures 50mm and 65mm respectively. the point P is in the HP and 20mm in front of VP, and the front view of the line is inclined at 45 ° to XY. Determine the true length and true angle.

(OR)

4. Draw the projections for the following points keeping the distance between the projectors as 25mm on the same reference line.

'A' point on HP and 30mm in front of VP
'B' 50mm below HP 30mm behind VP
'C' 35mm below HP on VP
'D' 50mm below HP 20mm in front of VP
'E' on HP 30mm above 50mm behind VP
'F' on VP and 30mm above HP

5. A Hexagonal pyramid of base side 30mm axis length 50 mm is inclined to HP at 45° and is inclined to VP at 30^0. Draw its Projections when one of the sides is perpendicular to HP.

(OR)

6. A Pentagonal Prism of side 30mm axis length 70mm has its axis inclined to HP at 30° and its edge inclined to VP at 45°. Draw its projections.

7. Draw the development of a cone of diameter 40mm axis length 65mm is sectioned by a plane inclined at 35° to HP and passing through midpoint of the axis of the cone.

(OR)

8. A Pentagonal Pyramid of side 30mm axis length 60mm is resting on its base on the HP with an edge of the base parallel to VP. It is cut by a sectional plane perpendicular to VP and inclined at 60° to the HP and bisecting the axis. Draw its front view and sectional top view and true shape of the section.

9. Draw the isometric view of frustum of a hexagonal prism of side 25mm axis length 65mm sectioned at 30mm above HP. A cone is resting on the top base of the prism of diameter 50mm axis 65mm

(OR)

10. Draw front View top view and side view for the following figure: