*R18 Regulation* *Subject code: 2E2AK*

# TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

## B.Tech II Semester Supplementary Examinations, June 2024

## Engineering Graphics

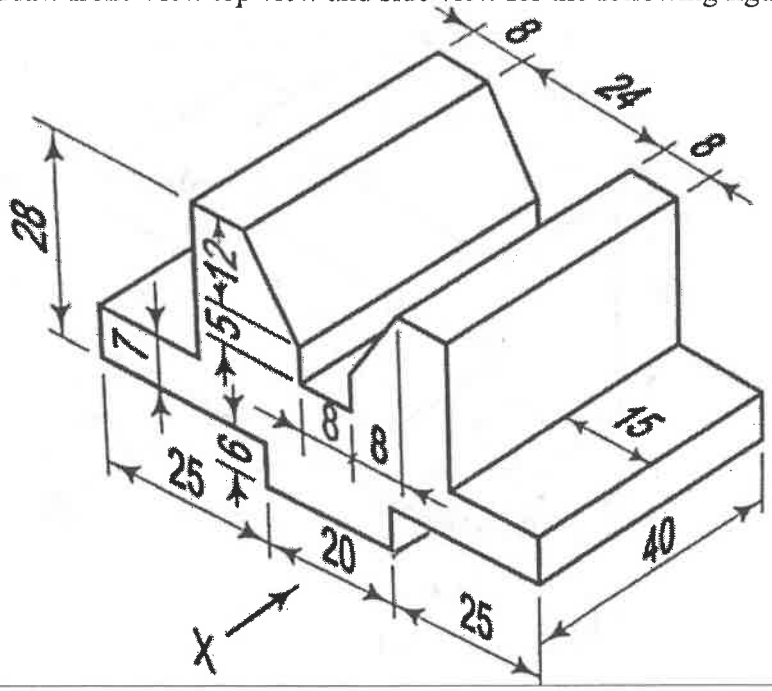
(Common to ECE & CSE)

***Maximum Marks: 70*** Date:02.07.2024 Duration: 3 hours

Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

| All the following questions carry equal marks (5X14M=70 Marks) | | CO | Bloom Tx |
|---|---|---|---|
| 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. [14M] | 1 | L2 |
| | 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. [14M] | 1 | L2 |
| 3 | A line AB 100mm long has its front view inclined at an angle of $45^0$to XY. The point A is in the VP and 25mm above the HP. The length of the front view is 60mm. Draw The top view of the line and measure its length also find its inclination of AB with HP and VP. [14M] | 2 | L2 |
| | OR | | |
| 4 | Draw the projections of a circular plane with a 50mm diameter, resting on a point A on its circumference in the HP such that its surface is inclined at 30° to VP and inclined to HP at 45° draw its projections. [14M] | 2 | L2 |
| 5 | A Square lamina ABCD with side 40mm has its corner A in the HP its diagonal AC is inclined at 45° to HP. While the diagonal BD is parallel to HP and inclined at 30° to VP. Draw its projections. [14M] | 3 | L2 |
| | OR | | |
| 6 | A hexagonal pyramid of base side 30mm axis length 60mm, rests on one of its base corners on the HP with axis inclined at $45^0$ to the H.P. Draw its projections when a vertical plane containing the axis and the corner that lies in the H.P is inclined at $30^0$ to the V.P. [14M] | 3 | L2 |

| | | | |
|---|---|---|---|
| 7 | A Pentagonal Pyramid 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. [14M] | 4 | L2 |
| | OR | | |
| 8 | 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. [14M] | 4 | L2 |
| 9 | A Cone is placed centrally on the top of a cube with 40mm side which is placed centrally over a cylindrical block. The cone has base diameter 30mm and axis length 40mm. The cylindrical block has 80mm base diameter and 10mm thickness. Draw the isometric projection. [14M] | 5 | L2 |
| | OR | | |
| 10 | Draw front View top view and side view for the following figure: [14M]   | 5 | L2 |