



R18 Regulation *Subject code: 2E1AE*
TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech I Semester Supplementary Examinations, February 2024

Engineering Graphics
(Common to CE,EEE,ME & IT)

Maximum Marks: 70

Date: 24.01.2024 Duration: 3 hours

Answer All the following questions.

(14M X 5=70Marks)

- 1 Draw a hypocycloid having a generating circle of diameter 50 mm and a directing curve of radius 150 mm. Also draw a normal and a tangent at a point P on the curve. (14M)

OR

- 2 An inelastic string of length 100 mm is wound around a circle of diameter 26 mm. Draw the path traced by the end of the string. Draw also normal and tangent at any point on the curve. (14M)
- 3 A thin circular plate of diameter 60mm appears in the front view as an ellipse of major and minor axes 60mm and 40mm respectively. Draw its projections when one of the diameters is parallel to both the reference planes. (14M)

OR

- 4 A semi-circular plane of diameter 60 mm has its straight edge on the HP and inclined at 35° to the VP. Draw the projection of the plane when its surface inclined at 30° to the HP. (14M)
- 5 A hexagonal prism of base side 20mm and height 50mm rests on the ground on one of the edges of the base & the axis is inclined at 45° to the ground & parallel to VP draw its projections. (14M)

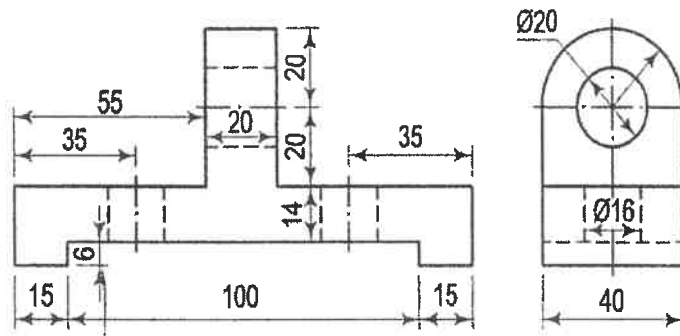
OR

- 6 A hexagonal pyramid of base side 25 mm and axis 60 mm long is resting on an edge of the base on H.P. Draw the projections of the solid, when the axis makes an angle 45° with V.P. and the base of the solid is nearer to V.P. (14M)
- 7 A pentagonal pyramid with side of base 30mm and axis 60mm long, is resting on its base on HP and one of the edges of base perpendicular to VP. It is cut by a sectional plane, parallel to HP and passing through the axis at a point 35mm above the base. Draw the projections of the section. (14M)

OR

- 8 A cone of base 50 mm diameter and axis 75 mm long, is lying on the H.P. on one of its generators with the axis parallel to the V.P. A section plane which is parallel to the V.P. cuts the cone at an angle of 45° bisecting the axis. Draw its true shape and development of the surface of the remaining portion of the cone. (14M)

- 9 Draw an isometric diagram from given orthographic projection views shown in figures. (14M)



OR

- 10 An isometric view of a solid is shown in figure. Draw the front, top and right side orthographic views of the solid. (14M)

