



R20 Regulation

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY
(Autonomous, Accredited by NAAC with 'A' Grade)

Subject code: 3E2AQ

B.Tech II Semester Regular Examinations, September 2021

Engineering Graphics
(ECE)

Maximum Marks: 70

Date: 17.09.2021 Duration: 3 hours

- Note: 1. It consists of 5 Units. Answer any one full question from each unit which carries 14M.
2. Each question carries 14 marks and may have a, b, c, d as sub questions.

Answer All the following questions.

(14M X 5 = 70 Marks)

- 1 A Fixed-point F is at a distance of 50mm from fixed straight line. Trace the path of the Curve if $e=2/3$. Also Draw tangent and normal to it. [14M]
OR
- 2 Draw a hypocycloid generated by a rolling circle of 60 mm diameter for one complete revolution. The radius of directing circle is 100 mm. Draw a tangent and normal to the hypocycloid at 50 mm from the centre of the directing circle. [14M]
- 3 A 70mm long line PQ, has an end P at 20 mm above the HP and 30 mm in front of the VP. The line is inclined 45° to HP and 30° to VP. Draw its projections. [14M]
OR
- 4 A regular hexagonal plate of 40 mm side inclined at 45° to HP and surface inclined 30° to VP. Draw the projections of the plate if the thickness is negligible. [14M]
- 5 A hexagonal pyramid, having a base of 30 mm side and a 60 mm long axis, has an edge of its base on the ground and the axis is inclined at 30° to the HP. The edge of the base on which it rests is inclined 45° to the VP. Draw its projections. [14M]
OR
- 6 A cylinder of base diameter 50 mm and axis 70 mm has a generator in the VP and inclined at 45° to the HP. Draw its projections. [14M]
- 7 A cone, with a 60 mm base diameter and a 70 mm long axis, is resting on its base on the HP. It is cut by an AIP bisecting the axis and is making 45° with the HP. Draw its sectional top view and true shape of the section. [14M]
OR
- 8 A hexagonal prism of base side 30 mm and height 70 mm, is resting on its base on the HP with a side of the base perpendicular to the VP. Draw the development of the internal surface of the prism. [14M]

9 A sphere with a 50 mm diameter rests centrally over a cube with a 60 mm side. Draw its isometric view. [14M]

OR

10 Draw the following views for the object shown in figure. All dimensions are in mm.

- i) Front view
- ii) Top view
- iii) Left Side view

[5M+5M+4M]

