R20 Regulation *Subject code: 3E2AP*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech II Semester Regular Examinations, September 2021

Engineering Graphics

(EEE)

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.

Answer All the following questions. **(14MX 5=70Marks)**

1 Draw a Hyperbola with the distance between its focus and directrix equal to 50 mm and the eccentricity equal to 3/2. (14M) L4

OR

2 Draw an Epicycloid of a circle of 40 mm diameter, which rolls outside on another circle of 120 mm diameter for one revolution clockwise. (14M) L4

3 A line PQ, 75 mm long has its end P, 15 mm above the HP and 20 mm in front of VP. The other end Q is 70 mm above HP and 55 mm in front of the VP. Draw the projections of line and find its true inclinations with HP and VP. (14M) L4

OR

4 A Rectangular plate measuring 65 mm × 35 mm is resting on its shorter side on the HP, inclined at 35° to the VP. Its surface is inclined at 55° to the HP. Draw its projections. (14M) L4

5 A Cone of base diameter 35 mm and axis length 55 mm has a point of its base circle in the VP, 30mm above HP. Its axis is inclined at 50° to the VP and parallel to the HP. Draw it projections. (14M) L4

OR

6 A Hexagonal Pyramid of base side 30 mm and axis length 50 mm is lying on the HP on one of its triangular faces with its axis parallel to the VP. Draw the top and front views of the pyramid. (14M) L4

7 A square pyramid has a base side of 40 mm and altitude 80 mm. It rests with its base on HP such that one side of the base is inclined at 30° to VP. The pyramid is cut by a plane which bisects the axis and is inclined at 45° to HP. Draw the front view, sectional top view and true shape of the section. (14M) L4

OR

8 A hexagonal prism of base side 30 mm and axis height 75 mm is resting on its base on HP such that a rectangular face is parallel to VP. It is cut by a section plane perpendicular to VP and inclined at 30° to HP, meeting the axis at a distance of 40 mm from the base. Draw the development of lateral surfaces of the lower portion of prism. (14M) L4

9 A Cylinder of base diameter 30 mm and axis length 60 mm is placed on its base, centrally on the top of a square slab of side 60 mm and thickness 20 mm. Draw the isometric projection of the combination of solids. (14M)

OR

10 Draw the orthographic views of the following object. (14M)