R22 Regulation *Subject code: 4E2AK*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech II Semester Regular Examinations, September 2023

COMPUTER AIDED ENGINEERING GRAPHICS

(Electronics & Communication Engineering)

Maximum Marks: 60 Date:16.09.2023 Duration: 3 hours

Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 10 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 (10x1M=10 Marks)

1. a Define eccentricity.
   b Define a Cycloid.
   c What is the trace of a line?
   d Initial work and construction lines are drawn using _____ pencil.
   e What is meant by prism?
   f Define a cylinder.
   g What are the types of surface development?
   h Which method is used to develop the lateral surface of cylinder?
   i What is the relation between true length and isometric length?
   j Define isometric axis.

Part-B

Answer All the following questions. (5X10M=50 Marks)

2 Construct a scale of 1:40 to read metres, decimetres and centimetres and long enough to measure up to 6m. Mark a distance of 4.76m on it. [10]

OR

3 Draw an ellipse when the distance of its focus from its directrix is 50mm and eccentricity is 2/3. Also draw a tangent and a normal to the ellipse at a point 70mm away from the directrix. [10]

4 A line AB 75mm long is inclined to HP at 30° and to VP at 45°. Draw is projections when one of the end is 20 above HP and 30 in front of VP. [10]

OR

5 The Top view of 70mm long line measures 60mm while its front view measures 55mm. Draw the projections of the straight line when one of the end is 30 above HP and 25 in front of VP. [10]

6 A Hexagonal pyramid of base side 30 mm and axis length 65 mm is inclined to H.P at 30° and its axis is inclined to V.P at 45° draw its projections. [10]

OR

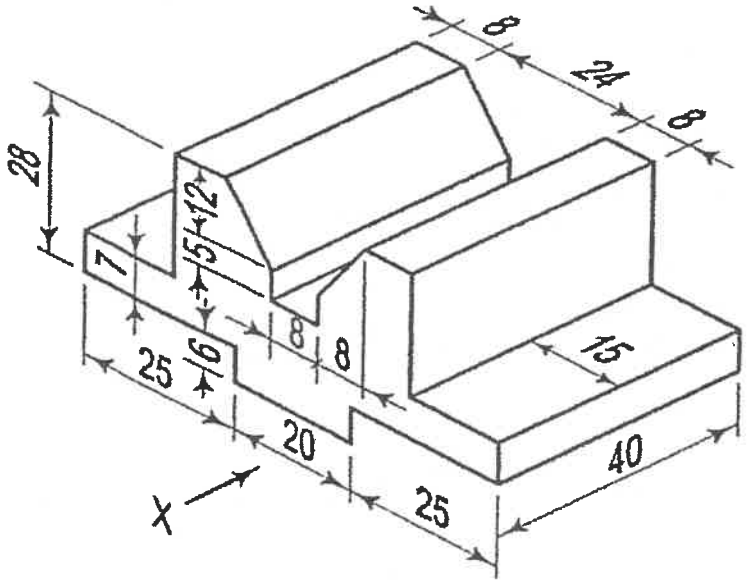
7 A cone with 50 mm diameter and axis 65 mm has one of its generators in the VP and inclined at 45^0 to the HP draw the projections of the cone. [10]

8 Draw the development of lateral surface of hexagonal pyramid with a 30mm base side and 60mm long axis, which is resting o its base in the H.P such that an edge of the base is perpendicular to V.P when a horizontal section plane cuts the pyramid at a height of 25mm from the base. [10]

OR

9 A cylinder of 40 mm diameter, 60 mm axis length and having its axis vertical is cuts by a section plane, perpendicular to the V.P, inclined at 45° to the H.P and intersecting the axis 32 mm above the base. Draw development of its lateral surfaces. [10]

10 Draw the front view, top view and side view of the figures shown below. All dimensions are in mm. [10]



OR

11 Draw the isometric view of a hexagonal prism, with side of base 30mm and length of axis 60mm, when its axis is Vertical direction. [10]