R22 Regulation *Subject code:4E2AE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech II Semester Supplementary Examinations, June 2026

ENGINEERING GRAPHICS

(CE)

Maximum Marks: 60 Date: 22.06.2026 Duration: 3 hours

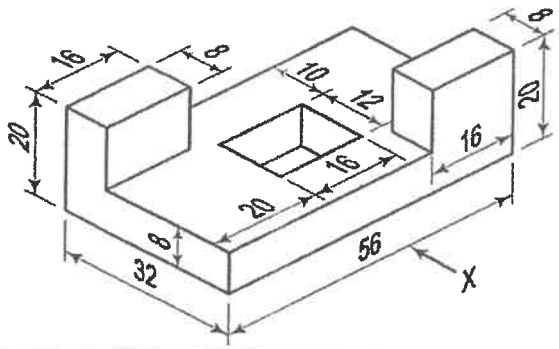
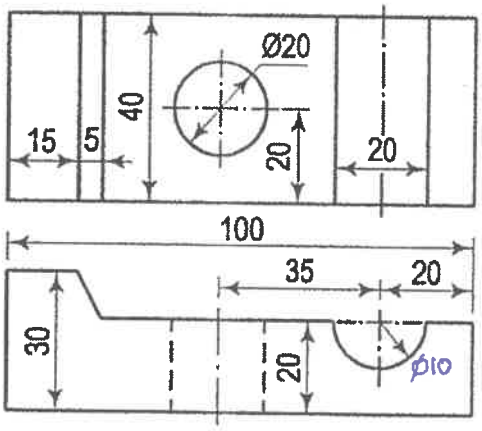
Note: 1.This question paper contains two parts A and B.
2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)		Marks	CO	BTL
1.a	Mention the different types of scales used in practice.	1M	1	L1
b	Define the conic sections.	1M	1	L1
c	Centre lines, section lines are drawn using _____ pencil.	1M	2	L3
d	In IV quadrant, the front will be _____ the reference line.	1M	2	L3
e	What is meant by prism?	1M	3	L3
f	If the axis of a solid is perpendicular to H.P. and one face is inclined to V.P. then how many stages are required to solve the problem.	1M	3	L4
g	What is an auxiliary inclined plane?	1M	4	L1
h	When a pentagonal pyramid is developed it net consists of what?	1M	4	L2
i	Orthographic projection is the representation of ____views on the mutual perpendicular projection planes.	1M	5	L1
j	A line AB is on the horizontal plane inclined to vertical plane at 45 degrees, _____ view gives the actual length of the line AB.	1M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
2	Draw a Hyperbola when the distance of its focus from its directrix is 50mm and eccentricity is 3/2. Also draw a tangent and a normal to the hyperbola at a point 25mm from the directrix.	10M	1	L2
	OR			
3	Draw a cycloid of a circle of diameter 60mm for one revolution. Also draw a tangent and a normal to the curve at a point 35mm above the base line	10M	1	L2
4	A Pentagonal Plane of side 40mm has a circular hole of dia 20mm is inclined to HP at 30° and its surface is inclined to VP at 45°. Draw its Projections when one of the side is perpendicular to HP.	10M	2	L3
	OR			
5	A 90mm line PQ is inclined at 45^0 to the H.P and 30^0 to V.P. Its end P is the H.P. and 40mm in front of V.P. Draw its projections keeping the end Q in the fourth quadrant.	10M	2	L3

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.	10M	3	L3
	OR			
7	A cylinder of base diameter 30 mm and axis length 60 mm is inclined to H.P at 30^0 and its axis is inclined to V.P at 45^0 . Draw its projections.	10M	3	L3
8	A pentagonal prism, having a base 30mm side and 70mm long axis is resting on its base on H.P such that one of its rectangular surfaces is parallel to V.P. It is cut by an auxiliary inclined plane at 45^0 and passes through the midpoint of the axis. Draw the developments of truncated prism.	10M	4	L4
	OR			
9	Draw the development of lateral surface of hexagonal pyramid with a 30mm base side and 60mm long axis, which is resting on 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.	10M	4	L4
10	Draw the front view, top view and side view of the figures shown below. All dimensions are in mm. 	10M	5	L3
	OR			
11	Draw an isometric diagram from given orthographic projection views shown in figures. 	10M	5	L3