R22 Regulation *Subject code: 4E2AK*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

B.Tech II Semester Regular/Supplementary Examinations, June 2024

COMPUTER AIDED ENGINEERING GRAPHICS

(ECE)

Maximum Marks: 60 Date:26.06.2024 Duration: 3 hours

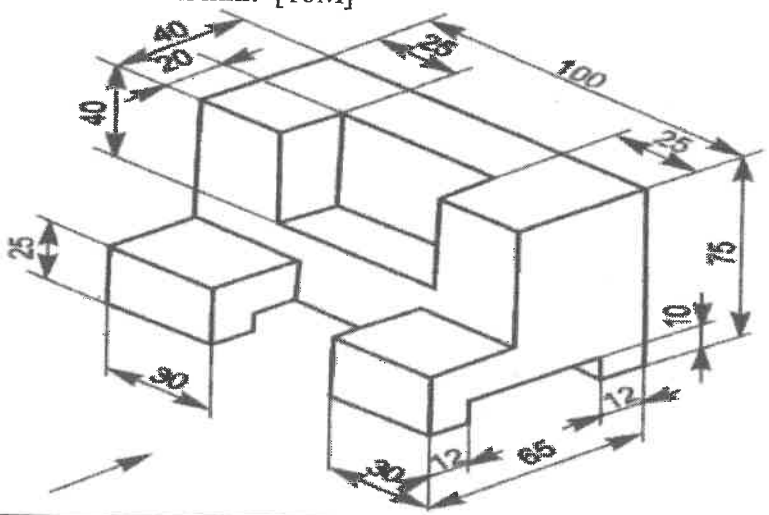
Note: **1.This question paper contains two parts A and B.**
2. Part A is compulsory which carries 10 marks. Answer all questions in Part A.
3. Part B consists of 5 Units. Answer any one full question from each unit.
4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X1M=10 Marks)			CO	Bloom Tx
1.	a	Define Representative Fraction (r.f.)?	1	1
	b	Define a conic. What are the different conics used in your drawing?	1	1
	c	What is orthographic projection?	2	1
	d	Define Line. What are various types of Lines?	2	2
	e	Differentiate between first angle and third angle projection.	3	2
	f	Define vertical plane.	3	1
	g	What is the Principle of Development of Surfaces?	4	1
	h	Differentiate between frustum of a pyramid and a truncated pyramid.	4	2
	i	Define isometric projection	5	1
	j	What are the advantages of drawing isometric views?	5	1

Part-B

Answer All the following questions. (5X10M=50 Marks)			
2	Construct a hyperbola with the distance between the focus and directrix as 50 mm and eccentricity as 3/2. Also draw the tangent and normal to the curve at a point, 25 mm from the axis. [10M]	1	3
	OR		
3	Construct a diagonal scale of R.F = 1/6250 to read up to 1 kilometer and to read meters on it. Show a length of 653 meters on it. [10M]	1	3
4	A regular hexagon of side 40 mm is resting on one of its sides in the HP and makes an angle of 60^0 to the VP and the surface is inclined at 45^0 to the HP. Draw the projections. [10M]	2	3
	OR		
5	A line AB, 75 mm long, is inclined at 45^0 to the H.P. and 30^0 to the V.P. Its end A is in the H.P. and 20 mm in front of the V.P. Draw its projections. [10M]	2	3

6	A pentagonal prism of side of base 30mm axis 70mm is resting on one of its base edges in H.P. with its axis inclined at 45^0 to H.P. The top view of the axis is inclined at 30^0 to V.P. Draw the projections. [10M]	3	3
	OR		
7	A right circular cone, base diameter 35 mm and axis 65 mm long, is resting on its circular rim in such a way that one of the generators normal to the H.P, and the plane of its axis makes an angle of 45^0 with the V.P. Draw its projections. [10M]		3
8	A hexagonal prism of base side 30 mm and axis 70 mm is resting on its base on the ground with a side of base inclined at 45° to the V.P. It is cut by an auxiliary inclined plane inclined at 45° to the H.P. and passes through a point 15 mm below the top end of the axis. Draw the development of the lateral surface of the truncated prism. [10M]		3
	OR		
9	A cylinder of base diameter 50 mm and axis 70 mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to the V.P., inclined at 45° to the H.P., passing through the top of a generator and cuts all the other generators. Draw the development of its lateral surface. [10M]	4	3
10	Draw front view, top view and side view of the model shown below: All Dimensions are in mm. [10M] 	5	3
	OR		
11	Draw the isometric projection of the frustum of a hexagonal pyramid of base side 40 mm, top side 25 mm and height 70 mm. the frustum rests on the base on the HP. [10M]	5	3