R22 Regulation *Subject code: 4E2AE*

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

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

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

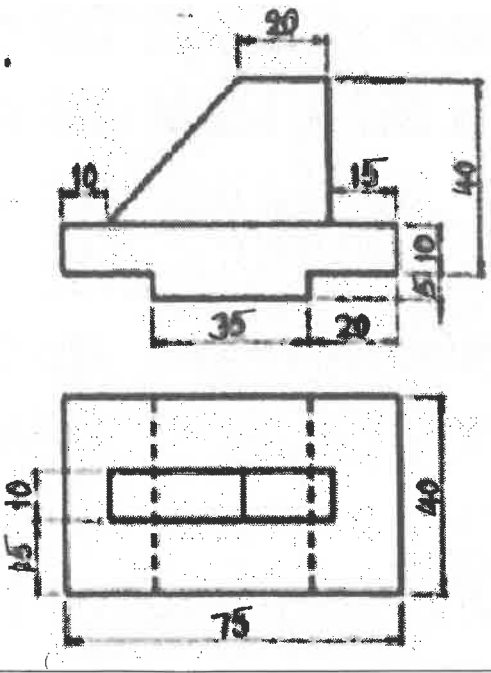
ENGINEERING GRAPHICS

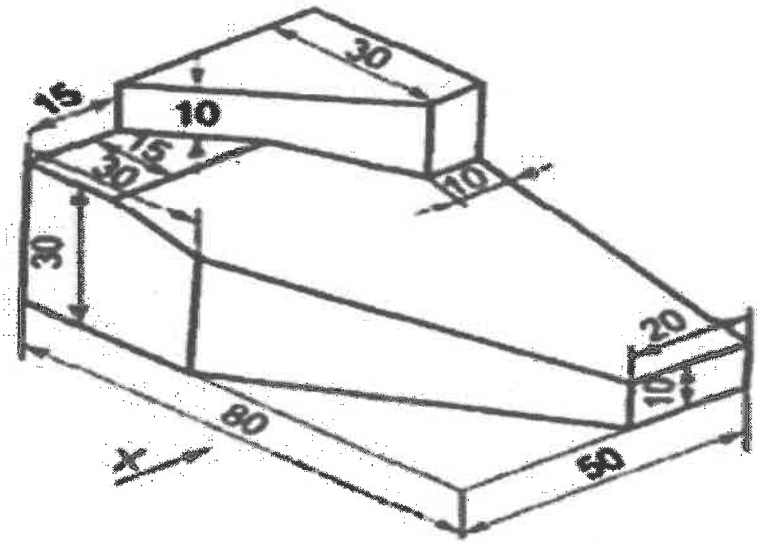
(CIVIL ENGINEERING)

Maximum Marks: 60 Date:04.07.2024 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	CO	Bloom Tx
All the following questions carry equal marks (10X1M=10 Marks)				
1	a	Define eccentricity values for parabola, hyperbola and ellipse	1	L1
	b	List out the instruments as per IS 9609 provision.	1	L1
	c	List out the main differences between first angle projection and third angle projection.	2	L1
	d	Name the possible orientations of planes, with respect to the principal planes of projection	2	L1
	e	Differentiate between right regular and oblique solids.	3	L2
	f	Define prism	3	L1
	g	What is the difference between frustum of a cone and truncated cone	4	L2
	h	What are the dimensions of the solid that can be seen in the side view?	4	L1
	i	Why the second and fourth angle projections are not followed in projections?	5	L3
	j	What is the difference between Isometric view and Isometric projection?	5	L2
		Part-B		
Answer All the following questions. (5X10M=50Marks)				
2		A Fixed point is at a distance of 40mm from fixed straight line trace the path of the curve if e = 2/3. [10]	1	L3
		OR		
3		A stone is thrown from a building 6.0 meters height. It just crosses the top of a tree 12 meters high. Trace the path of projectile if the horizontal distance between the building and the tree be 4.0 meters. Also find the distance of the point from the building where the stone falls on the ground. [10]	1	L3
4		A line LM 70 mm long has its end 'L' 10 mm above H.P and 15 mm in front of V.P. Its top view and front view measures 60 mm and 40 mm respectively. Draw the projections of the line and determine its inclination with H.P and V.P. [10]	2	L3
		OR		

5	A pentagonal pyramid, having a base with a 30 mm side and a 60 mm long axis, has one of the edges of the base is in the H.P. The solid is tilted in such a manner that the highest point of the base is 40 mm above the H.P. and the edge of the base on which it is resting is parallel to the V.P. Draw its projections. [10]	2	L3
6	A hexagonal prism, having a base with a 30 mm side and a 70 mm long axis, has its face on the H.P. and the axis parallel to V.P. It is cut by a plane, which is perpendicular to VP and makes an angle of 45^0 with the HP bisecting the axis. Draw the sectional front view and true shape of the section. [10]	3	L3
	OR		
7	A cone, diameter of the base 50 mm and axis 50 mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the H.P. and passing through the apex. Draw its front view, sectional top view and true shape of the section. [10]	3	L3
8	A cylinder of diameter 50 mm and height 75 mm is resting on the ground on its flat end. It is cut by a sectional plane inclined at 30^0 to the axis of the cylinder and passing through a point on the axis at height of 50 mm from the base. Draw the lateral surface of the bottom part. [10]	4	L3
	OR		
9	A hexagonal pyramid, base 50mm side and axis 100mm long, is lying on the H.P on one of its triangular faces with the axis parallel to the V.P. A vertical sectional plane the H.T of which makes an angle of 30^0 with the reference line passes through the center of the base and cuts the pyramid, the apex being retained. Draw the top view, sectional front view, true shape of the section. [10]	4	L3
10	Draw the Isometric Projections for the following figures. [10] 	5	L3
	OR		

11	Draw the orthographic view of the following figure. All dimensions are in mm. [10]  	5	L3