Question Paper Code: R22A11ME03/R22A12ME03

R22

ANURAG Engineering College

(An Autonomous Institution)

I B.Tech I Semester Regular Examinations, January – 2025

I B.Tech II Semester Supplementary Examinations, January - 2025

COMPUTER AIDED ENGINEERING GRAPHICS

(COMMON TO ALL BRANCHES)

Time: 3 Hours **Max. Marks: 60**

Section – A (Short Answer type questions) (10 Marks)

Answer All Questions

		Course Outcome	B.T Level	Marks
1.	What is the concept of engineering graphics?	CO1	L1	1M
2.	List out any four geometrical commands in CAD.	CO1	L2	1M
3.	Define the first angle projection?	CO2	L1	1M
4.	Draw the projections of a point A lying on HP and 25mm in front of V.P.	CO2	L1	1M
5.	What do you mean by prism?	CO3	L1	1M
6.	Write short notes on projection of solids?	CO3	L1	1M
7.	What is the development of the surface of a solid?	CO4	L1	1M
8.	How's cylinder surface develop.	CO4	L2	1M
9.	List the Methods of Projections	CO5	L1	1M
10.	What do you mean Non-Isometric Lines?	CO5	L1	1M

Section B (Essay Questions)

Answer all questions, each question carries equal marks. **(5 X 10M = 50M)**

11. A)	A circle of 50 mm rolls on another circle of 150 mm and outside it. Trace the path of a point P on the circumference of the smaller circle. Also draw a tangent and normal to the curve at a point on the curve, 85 mm from the center of the big circle.	CO1	L3	10M
	OR			
B)	Construct an ellipse when the distance of the focus from the directrix is 60 mm and eccentricity is 2/3. Draw tangent and normal at any point on the curve.	CO1	L3	10M
12. A)	A line PQ, 60 mm length is inclined at an angle of 45^0 to HP and 30^0 to VP. The end P is 25 mm above HP and 40 mm in front of VP. Draw the front view and top view of the line.	CO2	L3	10M
	OR			
B)	A regular pentagon of side 30 mm has one of its edges parallel to VP and inclined at 30^0 to HP. The pentagon is inclined at 45^0 to VP. Draw its projections.	CO2	L3	10M
13. A)	A hexagonal pyramid of base side 30 mm and height 60 mm is lying on HP on one of its triangular faces on HP. Its axis makes an angle of 60^0 with the VP. Draw the projections of the solid.	CO3	L3	10M
	OR			
B)	A hexagonal prism of the base side 30 mm and axis length 60 mm rests on the HP on one of its base edges with its axis inclined at 45° to HP and parallel to the VP. Draw its projections.	CO3	L3	10M

14. A)	A pentagonal pyramid with is base side 20 mm and height 55 mm, is resting with its base on HP such that one of its edge is parallel to VP. It is cut by a sectional plane inclined at 30^0 to HP and perpendicular to VP and passing through the one of the corners of the base on HP. Draw the development of the remained portion.	CO4	L3	10M
	OR			
B)	A cylinder 0f 50 mm diameter and 70 mm height is standing with its base on HP. It is cut by section plane inclined at 60^0 to HP and perpendicular to VP and passing through the mid point of the axis. Draw the development of the cut portion.	CO4	L3	10M
15. A)	Draw an isometric view of a Hexagonal pyramid of base side 40mm and axis 70mm long, in the following positions. i) Vertical. ii) Horizontal.	CO5	L3	10M
	OR			
B)	Draw the front view, top view and right side view of the object given in figure below. All dimensions are in mm.	CO5	L3	10M