Department of Computer Engineering

Academic Year: 2019-20(EVEN)

ASSIGNMENT NO:1

Subject: Computer Graphics Lab **Semester: IV**

Course Outcome	CO 1	CO 2		CO 3		
Question No.	1 a	2 a	2 b	3 a	3b	Total
Marks Obtained						
Marks Allotted	04	10	08	03	05	30

Name:

Batch:

Roll No. :

Signature of Faculty:

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1.	a	Consider a non-interlaced monitor with resolution Nx M, a refresh rate of R frames per Sec, a Horizontal retrace time of Hr. What is the fraction of total refraction time per frame spent in retrace of electron beam?	CO1	4M	BT5
2.	a	Plot the point for mid-point Ellipse with rx = 4 and ry=6.	CO2	10M	BT3
2.	b	Find the pixel position using Bresenham Line drawing algorithm when scan converting from A (4,4) to B (-3,0).	CO2	8M	BT3
3.	a	Prove that two scaling transformation are commutative (S1*S2=S2*S1) using suitable example.	CO3	3M	BT5
3	b	A polygon has 4 Vertices Located at A (20,10), B (60,10), C (60,30), D (20,30). Calculate the vertices after applying a transformation matrix to double the size of polygon with point A located on the same places.	CO3	5M	BT3

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Course Outcomes (CO) Students' will be able to:

CO1: Understand the basic concepts of computer graphics using graphical tools to build an application.
CO2: Implement various output and filled area primitive algorithm using C/OpenGL.
CO3: Acquire knowledge about geometric transformations and apply it on graphical objects.
CO4: Gain basic knowledge of viewing and clipping and apply it on graphical objects.
CO5: Implement curve, fractal generation and projection.
CO6: Understand visible surface detection techniques and illumination model.

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Bloom's Taxonomy

BT1- Remember, BT2- Understand, BT3- Apply, BT4- Analyze, BT5- Evaluate, BT6- Create

Subject In charge **Verified DQA**