MAHATMA GANDHI MISSION **MGM's College of Engineering and Technology, Kamothe, Navi Mumbai**

[AY 2021-22]

Branch: Computer Engineering **Semester: III CBCGS (C Scheme)**
Class: SE (A) **Subject: CG**

ASSIGNMENT NO.1

	Question	Module	Bloom's Taxanomy level	Program Indicator (PI)	CO
Q1. Choose Correct Options / Fill in the blanks					
a	In DDA line drawing method, for lines having negative slope with absolute value greater than 1 and taking right end point as starting point, the X and Y coordinate increments are? i. 1/m and -1 ii. -1/m and 1 iii. -1 and -m iv. 1 and ,	M2	L2	2.1.2	CO2
b	EGA is……..	M1	L1	2.1.2	CO1
c	In mid point ellipse method, coordinate of points lying on ellipse are calculated in? i. One quadrant first and others by successive rotation ii. One quadrant first and others by successive reflection iii. One quadrant first and others by successive translation iv. All quadrants	M2	L1	2.1.2	CO2
d	GUI is ……	M1	L1	2.1.2	CO1
e	The gray level value of all pixels is stored in computers in the form of an array, this array is called as? i. Display Area ii. Monitor iii. Frame Buffer iv. Aspect Ratio	M1	L1	2.1.2	CO1
Q2. Choose Correct Options/ Fill in the blanks					
a	Raster images are commonly called as i. Pix map ii. Bit map iii. both I and ii iv. none of these	M1	L1	2.1.2	CO1
b	4-bits are assigned to hold ____ Color values.	M1	L1	2.1.2	CO1

c	Pixel mask means i) A string containing only 1's ii) A string containing only 0's iii) A string containing 1 and 0 iv) A string containing 0 and 0	M1	L1	2.1.2	CO1
d	In ---------- display, electronic beam is moved all over the screen one scan line at a time. i. Random Scan ii. Pen Plotter iii. Scanner iv. Raster Scan	M1	L2	2.1.2	CO1
e	Which devices provides positional information to the graphics system? a) Input devices b) Output devices c) Pointing devices d) Both a and c	M1	L1	2.1.2	CO1
Q3. state whether the following statements are true or false (Give Reasons)					
a	Bresanham's line drawing algorithm works on integer values only. a) True b) False	M2	L1	2.1.2	CO2
b	Cartography is not one of the applications of Computer Graphics. a) True b) False	M1	L1	2.1.2	CO1
c	Mid point circle algorithm follows 4-way symmetry to draw point on circumference of circle. a) True b) False	M2	L2	2.1.2	CO2
Q4. Name the following or define or design the following					
a	Resolution	M1	L1	2.1.2	CO1
b	Scan Conversion	M1	L1	2.1.2	CO1
c	Aspect Ratio	M1	L2	2.1.	CO1
Q5. Answer the following questions in brief (20 to 30 words)					
a	Write difference between Random and Raster Scan.	M2	L1	2.1.2	CO2
b	Define the following terms: Phosphorescence and Fluorescence.	M2	L2	2.1.2	CO2
c	What do you mean by rasterization in Computer Graphics?	M1	L2	2.1.2	CO1
Q6. Answer the following questions in brief (50 to 70 words)					
a	Rasterize the line segment using DDA line drawing algorithm. The two endpoint coordinates of the line segment are P1(0,0) and P2(5, 2)	M2	L1	2.1.2	CO2
b	Derive and explain midpoint ellipse drawing algorithm	M2	L2	2.1.2	CO2
c	What is computer graphics? Discuss application areas in computer graphics.	M1	L1	2.1.2	CO1

Q7. Think and Answer					
a	What is Antialiasing? Is it useful for Computer Graphics?	M2	L2	2.1.2	CO2
b	Calculate pixel positions along a straight line between A(20,20) and B(10,12) using Bresenham's line drawing method.	M2	L1	2.1.2	CO2
Q8. **My Ideas**					
a	Given radius r = 12 and center coordinates (50,50), compute the coordinates of points lying on the circle using Mid point circle algorithm	M2	L2	2.1.2	CO2
b	Plot the points for midpoint ellipse with $r_x = 8$, and $r_y = 6$ for region 1.	M2	L3	2.1.2	CO2