** 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**

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| **Q.No** | **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?   1. 1/m and -1 2. **-1/m and 1** 3. -1 and -m 4. 1 and , | M1 | L1 | 2.1.2 | CO1 |
| **b** | EGA is…………………….. | M1 | L1 | 2.1.2 | CO1 |
| **c** | In mid point ellipse method, coordinate of points lying on ellipse are calculated in?   1. One quadrant first and others by successive rotation 2. **One quadrant first and others by successive reflection** 3. One quadrant first and others by successive translation 4. All quadrants | M1 | L1 | 2.1.2 | CO1 |
| **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?   1. Display Area 2. Monitor 3. **Frame Buffer** 4. Aspect Ratio | M1 | L1 | 2.1.2 | CO1 |
| Q2. C Q2. Choose Correct Options | |  |  |  |  |
| **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 16 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.   1. Random Scan 2. Pen Plotter 3. Scanner 4. **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 | M1 | L1 | 2.1.2 | CO1 |
| **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** | M1 | L1 | 2.1.2 | CO1 |
| **Q4. Name the following or define or design the following** | |  |  |  |  |
| **a** | Resolution | M1 | L1 | 2.1.2 | CO1 |
| **b** | Define Computer Graphics. | 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** |  | M2 | L2 | 2.1.2 | CO2 |
| **c** |  | M1 | L2 | 2.1.2 | CO1 |
| **Q6. Answer the following questions in brief (50 to 70 words)** | |  |  |  |  |
| **a** | Write DDA line drawing algorithm with suitable example. | M2 | L1 | 2.1.2 | CO2 |
| **b** | Write mid-point circle drawing algorithm. | M2 | L2 | 2.1.2 | CO2 |
| **c** | Consider the line from (4, 9) to (7, 7). Draw a line using Bresenham’s algorithm. | M2 | L2 | 2.1.2 | CO2 |
| **Q7. Think and Answer** | |  |  |  |  |
| **a** | What is Antialiasing? Is it useful for Graphics | M2 | L2 | 2.1.2 | CO2 |
| **b** | Is Co-ordinate System is used in Computer Display? | M1 | L2 | 2.1.2 | CO1 |
| Q8. **My Ideas** | |  |  |  |  |
| a | What is Resolution? | M1 | L1 | 2.1.2 | CO1 |
| b | What are Resolution Modes? | M1 | L1 | 2.1.2 | CO2 |