



## Daffodil International University

Department of Computer Science and Engineering

Faculty of Science & Information Technology

Midterm Examination, Spring 2023

Course Code: CSE421, Course Title: Computer Graphics

Level: 4

Term: 1

Batch: 56 batch

Marks: 25

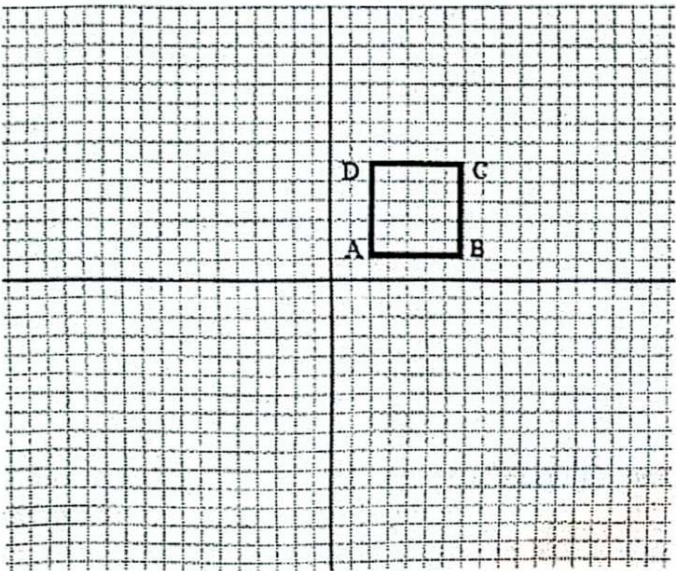
Time: 1.5 Hrs

Answer ALL Questions

*[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]*

|    |                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                |   |     |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---|-----|
| 1. | a)                                                                                                                                                                                                                                                                                                                                                                                                                        | Identify the application areas of Computer Graphics in Education and Training. | 2 | CO1 |
|    | b)                                                                                                                                                                                                                                                                                                                                                                                                                        | Write short note on Detect-View Storage Tube (DVST).                           | 3 |     |
| 2. | Suppose Mr. Manik wants to create a video game that involves drawing lines on a 2D grid. Starting points and ending points of the grid are (9, 18) and (19, 24). Now, <b>Apply</b> a line Algorithm that will help Mr .Manik to draw the line accurately.                                                                                                                                                                 |                                                                                | 7 | CO2 |
| 3. | Suppose we want to draw a shape like "S". For the purpose we have taken two circle having radius 6 and centered at (0,6) and (0,-6) respectively. We have trimmed down half of the each circle to look like the following figure "B". Now, analyze the Algorithm to determine the points of the following shape.<br><br><br><br>Fig: B |                                                                                | 8 | CO2 |

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|     |                                                                                                                                                        |       |     |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-----|
| 4.  | Discover the new points and plot-                                                                                                                      | (3+2) | CO2 |
| i.  | Rotate the following figure "C", in n degree in clockwise direction. Here n is the last 2 digit of your id. Example: My id is 193-15-12811, here n=11. |       |     |
| ii. | Scale the rectangle 1.5 times bigger.                                                                                                                  |       |     |
|     |                                                                     |       |     |
|     | Fig: C                                                                                                                                                 |       |     |