Daffodil International University
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Midterm Examination, Summer 2021 @ DIU Blended Learning Center
Course Code: CSE421 (Day), Course Title: Computer Graphics
Level: 4   Term: 2   Section: M, N
Instructor: NH   Modality: Open Book Exam
Date: Tuesday, 6 July 2021   Time: 09:00-11:30am
2:30 hrs to support online open/case study based assessment   Marks: 25

Answer **_ALL_** Questions

1. a) Which color method used by the following figure a? Describe. **[2.5]**

Figure a

[2.5]

  b) "Computer graphics deals with creation, manipulation and storage of different type of images and objects"- Justify your answer according to its application

2. In the following figure b, the triangle is not smooth to visualize in the computer graphics purpose. In your opinion which effect occurs in this figure? How can you solve the problem? **[5]**

Figure b

3. Suppose Mr. Abdullah has been appointed to design a video game, where he needs to **[5]** draw a helipad. For this purpose, he has to implement Midpoint Circle Algorithm. The helipad has a diameter of 26 units and center at (-2, -5). Now, help Mr. Abdullah in this by determining the points of the 1st quadrant of the helipad.

4. Determine the new points and plot- **[5]**

    i.   Rotate the following figure c, ** degree in x-axis direction
    ii.   Scale the rectangle 2 times smaller.

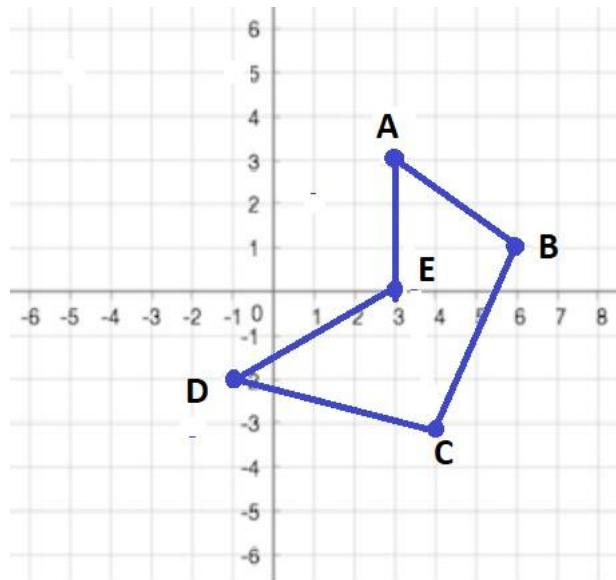Instruction: ** is the last two digits of your ID (If your ID is 181-15-10834, then the degree will be 34)

Figure c

5. Rina and Rubel are lost in a jungle. The coordinate of Rina's position is (25, 29) and **[5]** Rubel's position is (36, 34). The easiest way for them to find each other is to travel through a straight line. Now use Line drawing Algorithm which will provide full accuracy to find the easiest path from Rina's position to Rubel's position.