Daffodil International University

Department of Computer Science & Engineering
Faculty of Science & Information Technology

Final Examination
Course Code: CSE 421 (Day)
Section: ALL

Semester: Summer 2018
Course Title: Computer Graphics
Course Teacher: ALL

Marks: 40 Time: 2 Hrs

Answer **ANY FOUR (4)**

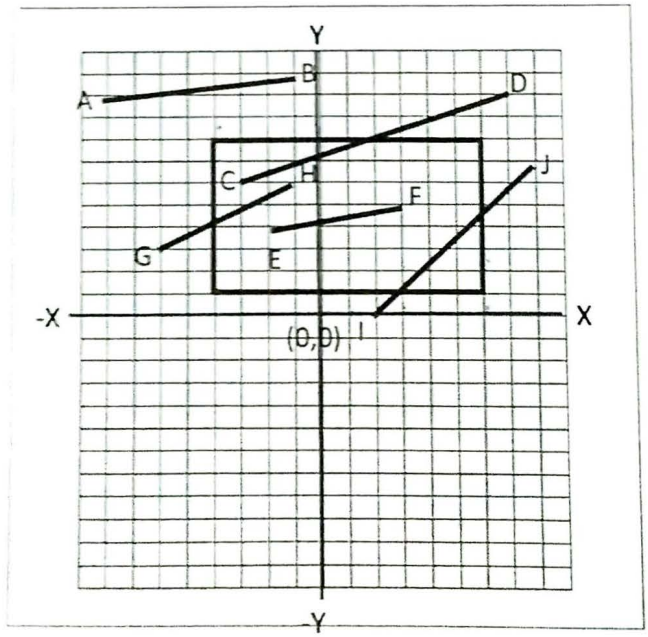
1. a. Describe the initial decision parameter of Mid Point Circle Algorithm. 4

b. 6

What is the trouble with this image? How can you resolve this image, describe all techniques.

2. a. Write the efficient procedure for finding the category of a line. 4

b. Using Cohen-Sutherland Line Clipping Algorithm find the categories of lines and clip the following lines given below: 6

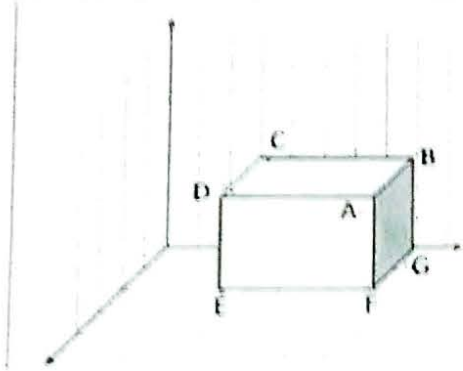


3. a. Write short note on Point Clipping and Scaling 4

b. Clip **W-shaped** polygon by using Weiler-Atherton polygon clipping algorithm 6

4. a. How can you derive rotation matrix for y-axis in 2D? 4

b. Find the coordinate values (x, y, z) of the following polygon. Translate the polygon by translation distance $(t_x, t_y, t_z) = (3, 4, 6)$, rotate the polygon in respect of y-axis about 30° and z-axis about 30°. 6



5. a. Clip the following **Arrow-shaped** polygon by using Sutherland-Hodgman's polygon clipping algorithm. 5

6. A rectangle has four coordinates such as (-13,6), (13, 15), (20, -17), (-10, -17). 5
What will be the coordinates of the rectangle if it is

i. $Sh_y = -3$, and $(t_x, t_y) = (3,5)$

ii. What will be the reflected along y axis.