

BRAC UNIVERSITY

Department of Computer Science and Engineering

Examination: Quiz 01
Duration: 30 Minutes

Semester: Spring 2025
Full Marks: 20

CSE 423: Computer Graphics

1. Consider a line segment A(110, -110) to B(-120, 220) and answer the following questions:
 - a. **Identify** the zone of the above line and **convert** the endpoints to zone 6. [4]
 - b. Using the Midpoint line drawing algorithm, **compute** the first seven pixels of the above line. **Show** the present value of **d** as well as **Δs** at each stage. [7]
 - c. Using the Digital Differential Analyser line drawing algorithm, **write** down the formulas for finding abscissas (x) and ordinates (y) for the above line. [4]
2. (a) Given a screen resolution of 2560 x 1440 and a frame rate of 65 FPS, calculate the total number of pixels processed per second. [3]
(b) Make a comparison between raster-based and vector-based graphics [2]