

# North East University Bangladesh

Department of Computer Science and Engineering

Mid Semester Examination Spring 2022

Program: B.Sc. (Eng.) In CSE

Course: CSE 423(Computer Graphics)

Total Mark: 30

Total Time: 1 Hr 30 mins

**Instructions: Answer the Q. No 1 & any two questions from Q. No 2,3,4.**

1. **Ans all the questions: (5\*2 = 10)**
  - a. What is the resolution of an image?
  - b. What is an image's aspect ratio?
  - c. Compute the resolution of a 2 x 2-inch image that has 512 x 512 pixels.
  - d. Find the CMY coordinates of a color at (0.2,1,0.5) in the RGB space.
  - e. If we want to resize a 1024 x 768 image to one that is 640 pixels wide with the same aspect ratio, what would be the height of the resized image?
2. Derive the equations for Bransenham's line drawing algorithm? (10)
3. A-line has a starting point (1,7) and ending point (11,17). Apply the Digital Differential Analyzer algorithm to plot a line. (10)
4. Given the center point coordinates (0, 0) and radius as 10, generate the points for the first octant to form a circle using the 'Mid-point Circle Drawing' algorithm. (10)

$6 + 2(5-10) = 5$