Nepal college of information technology

(Unit test)

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| Level: Bachelor | Semester-Spring-2014 | Full Marks: 70 |
| Programme: BE SE | | Pass Mark: 35 |
| Course: Computer Graphics | | Time : 2hrs. |

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| *Candidates are required to give their answers in their own words as far as practicable.* |
| *The figures in the margin indicate full marks.* |
| Attempt all the questions. |

1. a. Derive the Bresenham’s line drawing algorithm for |m|>1 from left to right. [8]

b. Digitize the circle having its center at (1,-1) and radius 10. [7]

2. a. Find the transformation matrix for the reflection with respect to any general line y=mx + c. [8]

b. Perform a rotation of the triangle A(0,1), B(3,3) and C(6,1) about a point (-1,-1). [7]

3. a. Define window and viewport and find the transformation matrix for window to viewport transformation. [8]

b. Write the mid-point ellipse drawing algorithm step by step. [7]

4. a. Discuss the different application areas that computer graphics deals with. [8]

b. Differentiate between raster and random scan system. [7]

5. Write Short Notes on Any Two (2 x 5 =10)

a. Beam penetration method and Shadow masking method.

b. Basic Transformation

c. Working principle of Cathode Ray Tube.

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