

Code No: 07A50503

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B. Tech III Year I Semester Examinations, November/December-2013

**COMPUTER GRAPHICS
(Common to CSE, ECompE, IT)**

Time: 3 hours

Max. Marks: 80

**Answer any five questions
All questions carry equal marks**

- 1.a) Explain the representative uses of computer graphics.
- b) Write a short note on laser printer. [8+8]
- 2.a) Explain the basic concept in line drawing.
- b) Explain the steps in Bresenham's line drawing algorithm. [8+8]
- 3.a) Explain the boundary fill algorithm in details.
- b) Explain inverse transformation. Derive the matrix for inverse transformation. [8+8]
- 4.a) Distinguish between viewport and window.
- b) Explain the Sutherland and Cohen subdivision algorithm for line clipping. [8+8]
- 5.a) Write a short note on B-Spline Curves.
- b) What are the properties of B-Spline Curves? [8+8]
- 6.a) What is diffused reflection? Give the illumination model that incorporate this reflection?
- b) Compare Gouraud shading and Phong's shading. [8+8]
7. Find the transformation matrix which aligns the vector $V = I + J + K$ with the vector $N = 2I - J - K$. [16]
- 8.a) Explain scan line algorithm for "hidden surface removal".
- b) What is meant by animation? Explain. [8+8]
