



B. Tech Degree V Semester (Supplementary) Examination May 2006

ME 503 COMPUTER GRAPHICS

(Prior to 2002 Admissions)

Time : 3 Hours

Maximum Marks : 100

- I. (a) Write a note on flat panel displays. (12)
(b) Compare positioning and pointing devices. (8)
OR
- II. Explain various graphics input devices. (20)
- III. (a) Explain the advantages of using homogeneous coordinate system. (8)
(b) Derive the two dimensional transformation matrix that rotates an object 45° clockwise, about an arbitrary point $P(1,3)$. (12)
OR
- IV. (a) Explain how reflection about an arbitrary line $y = mx + c$ in the xy -plane is accomplished. (10)
(b) Write a note on composite transformation and properties of concatenation. (10)
- V. (a) Obtain the 3-dimensional rotation matrices for x, y and z axes. (12)
(b) Explain stereographic projection. (8)
OR
- VI. Obtain the 3-dimensional perspective-projection transformation matrix. (20)
- VII. (a) Write a note on non parametric and parametric curves. (12)
(b) Explain parabolic blending. (8)
OR
- VIII. Explain B-spline curves, in details. (20)
- IX. (a) Write a note on quadric surfaces. (10)
(b) Explain sweep and bilinear surfaces. (10)
OR
- X. (a) Write a note on Bezier surfaces. (10)
(b) Write short notes on :
(i) Surface of revolution
(ii) Piecewise surface representation (10)