(Write your Exam Roll No.)

Exam Roll No. .....

END TERM EXAMINATION

SIXTH SEMESTER [BCA] MAY-JUNE 2009

Paper Code: BCA-306 Subject: Computer Graphics & Multimedia Application
Paper Id: 20306 (Batch: 2005-2006)
Time : 3 Hours Maximum Marks :75

Note: Q1. is compulsory. Internal choice is indicted.

Q1 Describe in brief any ten parts. (2.5 x 10=25)

(a) Evolution of multimedia & their storage devices.
(b) Virtual reality
(c) Analog versus digital display units
(d) What is the need for clipping?
(e) Describe aliasing.
(f) What are homogeneous coordinates?
(g) Matrix representation of 2-D scaling
(h) CSG
(i) Importance of primitives in graphics
(j) What is the raster scan display
(k) What is the use of Z coordinate value in representing 3-D object on to 2-D screen?
(l) Differentiate object space versus image space.

UNIT-I

Q2. (a) Describe Bresenham's midpoint algorithm for drawing a circle whose centre is (a, b) and radius 'r'.
(b) Differentiate pixel and raster line. In a raster system with a resolution of 1024 by 1024, what is the size of raster needed to store with 4 bit pl... (5+6)

OR

Q3. (a) Describe merits & demerits of southland-cohn algorithm vis-à-vis cyrus beck algorithm for clipping.
(b) Describe use of Dream Weaver. (3+7)

UNIT-II

Q4. (a) What is the difference between window port and view port? D... steps to transform the object from window port to view port.
(b) Show the shape and new position when a square with vertices (0,0), (0,2), (2,0), (2,2) is rotated by an angle of 45° (anti-clockwise) about the vertex (2,2). (6.5)

OR

Q5. (a) Reflection can also be achieved through the process of rotation. Show it properly.
(b) Determine the shape, when a square of unit dimension is rotated by -45° and x-axis scaled by $S_x = 3/2$. (6.5)

UNIT-III

Q6. (a) Explain the Octree representation of solid objects.
(b) How can sweep representation method help in creating 3-D models? Discuss with examples. (6.5+6)

OR

Q7. Describe the properties of B-spline and Bezier surfaces. Also discuss their merits and demerits. (12.5)

UNIT-IV

Q8. (a) Describe the evolution of multimedia and storage devices.
(b) Describe multimedia highway. (6.5)

OR

Q9. (a) Describe application of multimedia in home and office.
(b) Describe virtual reality. (6.5+6)

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