

(Please write your Exam Roll No.)

Exam Roll No. 024

END TERM EXAMINATION

Paper Code: BCA 306

SIXTH SEMESTER [BCA] MAY-2010

Paper ID: 20306

Subject: Computer Graphics & Multimedia Applications

Time : 3 Hours

Maximum Marks : 75

Note: Question 1 is compulsory and attempt one question from each unit.

Q1. Explain the following (any ten): (10x2.5=25)

- (a) Raster Scan Display
- (b) Homogenous Coordinates
- (c) Primitive Instancing
- (d) Regularized Boolean set operations
- (e) Matrix representation of 2-D rotation
- (f) Evolution multimedia and their storage devices
- (g) Open uniform B-spline
- (h) Tools for delivering multimedia on web
- (i) Polygon mesh representation
- (j) Use of multimedia
- (k) Quadric surfaces
- (l) Octree

Unit-I

- Q2. (a) Give Bresenham's Algorithm for making circle also draw a circle whose centre is (0,0) and radius is 8 units by using Algorithm. (9.5)
- (b) Describe the use of Dreamweaver. (3)

OR

- (a) Explain Cyrus-Beck algorithm for line clipping. (6.5)
- (b) Differentiate the following: (6)
- (i) Beam Penetration method and shadow mask method
- (ii) CRT & DVST

Unit-II

- Q3. (a) Describe steps to transform the object from window port to view port. (6)
- (b) Describe the transformation used in magnifications and reduction with respect to the origin. Find the new coordinates of the triangle A(0,0), B(2,2), C(5,4) after it has been: (6.5)
- (i) magnified twice its size
- (ii) reduced to half its size

OR

- (a) Consider a rectangle ABCD having coordinates A(2,2), B(8,2), C(8,6) and D(2,6). Rotate the rectangle ABCD with 90 degree in clockwise direction w.r.t. point (2,2). (8.5)
- (b) Prove that two scaling transformation commute i.e. $S_1 S_2 = S_2 S_1$. (4)

Unit-III

- Q4. (a) Give the properties of Bezier curves. For the cubic Bezier Curves ($n=3$). Find all the blending functions and the Bezier matrix. (9.5)
- (b) Explain boundary representation. (3)

OR

- (a) Explain B-spline curve by giving its properties consider, $d=n=3$ find out all the blending fns. (9.5)
- (b) Explain winged edge representation. (3)

Unit-IV

- Q5. (a) What all qualities are required for all the team members of multimedia project team? (6.5)
- (b) Give authoring tools for multimedia. (6)
- OR
- (a) Give in detail the formation and working of CD. (6.5)
- (b) Describe multimedia highway. (6)
