

(Please write your Exam Roll No.)

Exam Roll No. 002720209

END TERM EXAMINATION

SIXTH SEMESTER [BCA] MAY-JUNE 2012

Paper Code: BCA306

Subject: Computer Graphics & Multimedia Applications

Time : 3 Hours

Maximum Marks :75

Note: Q.no.1 is compulsory. Attempt one question from each unit.

- Q1 Answer **any five** of the following in brief:- (2.5x10=25)
- (a) Interactive graphics
 - (b) Dream weaver
 - (c) Raster scan display
 - (d) How aliasing effect is minimized?
 - (e) Why Transformation required?
 - (f) Could you carry out composite operation in normal Cartesian system?
 - (g) What happens if some of the control points of Bezier curves are coincident?
 - (h) Interactive solid modeling.
 - (i) Parametric curves.
 - (j) Tools for delivering multimedia on web.
 - (k) Describe one application of multimedia.
 - (l) List a few softwares of multimedia with applications.

UNIT-I

- Q2 (a) Describe Bresenham mid point circle drawing algorithm. Draw an octant of a circle of radius 'r' and centred at origin giving all steps. (6.5)
- (b) Role of computer graphics for scientific visualization. How does it help for improved understanding? (6)

OR

- Q3 (a) What and why clipping? List methods of clipping and describe one which you think is the best with reasons. (6.5)
- (b) (i) What are hidden surfaces? (3)
- (ii) How do we represent 3-D objects on 2-D VDU? (3)

UNIT-II

- Q4 What is the need of homogenous coordinate system for 2-D and 3-D Transformation? Compute the transformation matrix which reduces the square with vertices A(8,0), B(8,8), C(0,8) and D(0,0) to half its size keeping D fixed at (0,0). (12.5)

OR

- Q5 (a) How rotation process differs in 3-D system compared to 2-D system? (6)
- (b) Discuss steps to window-to-view part transformation. Why is it needed? (6.5)

UNIT-III

- Q6 (a) Explain polygon meshes. (5)
- (b) Give the properties of Bezier curves (x=3). Find all the blending function and Bezier matrix. (7.5)

OR

- Q7 (a) Explain sweep representation. (6)
- (b) Discuss use of regularized Boolean set operation. (6.5)

UNIT-IV

- Q8 (a) Discuss authoring tools for multimedia. (6)
- (b) Describe a useful application in real life situation of multimedia studies. (6.5)

OR

- Q9 (a) Discuss basic stages in developing of a multimedia project. (6)
- (b) Explain the construction of CD-ROM and list its various formats. (6.5)
