

Roll No.

BCA-401(N)

B. C. A. (Fourth Semester) EXAMINATION, May/June, 2015

(New Course)

Paper First

COMPUTER GRAPHICS AND MULTIMEDIA APPLICATION

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt questions from all Sections as directed.

Section—A

3 each

(Short Answer Type Questions)

Note : Attempt all questions.

1. (A) What is Computer Graphics ? Describe its uses.
- (B) Explain the conceptual framework of interactive graphics.
- (C) Discuss and explain Bresenham's algorithm for circle generation.
- (D) Differentiate between Raster scan display and Random scan display.
- (E) Explain Cohen-Sutherland line clipping algorithm.
- (F) Use DDA algorithm to construct the line from (0, 0) to (4, 6).
- (G) Differentiate between hypermedia and hypertext.

(H) Perform a counterclockwise 45° rotation of triangle A (2, 3), B (5, 5) and C (4, 3) about point (1, 1).

(I) Describe the various techniques which are used in colour CRT monitors.

Section—B

(Long Answer Type Questions)

Note : Attempt any two questions.

2. (a) Explain the working of CRT with the help of diagram. 8
- (b) What are the video controllers ? 4
3. What do you understand by Rotation ? Derive the rotation matrix of a point rotated by angle ϕ . 12
4. Write short notes on any three of the following : 12
 - (a) LCD
 - (b) Input devices
 - (c) VGA
 - (d) LED
5. Use the Bresenham's algorithm to construct the line from (5, 5) to (13, 9). 12

Section—C

(Long Answer Type Questions)

Note : Attempt any two questions.

6. Find the reflection of a point A [5, 9] about the line $y = x + 5$. 12
7. Explain the concept of polygon meshes. Describe different quadratic surfaces. 12
8. Define multimedia. Explain the applications of multimedia. Describe the features of multimedia. 12
9. Define computer animation. What are the categories of computer animation ? Explain the types of animation. Describe its use. 12

BCA-401(N)

2300