

Roll No. : .....

Total No. of Questions : 10 ]

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# **BC-388 (A)**

**B.C.A. (Part-III) Examination, 2022**

## **COMPUTER GRAPHICS**

Paper - BCA-305 (C)

(For Due Students Only)

*Time : 3 Hours ]*

*[ Maximum Marks : 50*

**Note :-** Attempt *five* questions in all, selecting *one* question from each Unit. All questions carry equal marks.

### **Unit-I**

1. (a) Explain Color Model CMY and RGB.  
(b) Explain working of CRT with block diagram.
2. (a) Discuss uses and applications of Computer Graphics.  
(b) Explain the working principles of LCD.

### **Unit-II**

3. (a) Write Ellipse midpoint drawing algorithm.  
(b) In your opinion which algorithm is better, Bresenham's algorithm or DDA, why ?

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4. Write a algorithm to construct circle using Bresenham's algorithm.

### **Unit-III**

5. (a) Describe Homogeneous Coordinate System.  
(b) How rotational and scaling transformation applied in 2D graphics ?
6. Explain the term Transformation. Briefly explain the methods that are used in translation and reflection.

### **Unit-IV**

7. What do you mean by Parallel and Perspective Projection ? Explain briefly.
8. Explain basic 3D transformation with suitable example.

### **Unit-V**

9. (a) Discuss Depth Buffer Algorithm for visible surface detection.  
(b) Explain window to viewpoint mapping with suitable diagram.
10. (a) Explain classification of surface detection algorithm with back face algorithm.  
(b) Show why Sutherland Hodgement clipping algorithm will only work for convex clipping region.