

Bachelor of Computer Application (B.C.A.) Semester-V (CBS) Examination**COMPUTER GRAPHICS-I****Paper—1**

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.

(2) Draw neat and labelled diagram wherever necessary.

EITHER

1. (a) Explain and state basic terminology used in the Computer Graphics. 5
- (b) Discuss CRT in detail. 5

OR

- (c) Differentiate between Raster Scan display and Random Scan display. 5
- (d) What are the advantages and disadvantages in Computer Graphics ? 5

EITHER

2. (a) Explain Bresenham's line generation algorithm in detail. 5
- (b) Explain flood fill algorithm in detail. 5

OR

- (c) Discuss Scanline algorithm in detail. 5
- (d) Give difference between DDA and Bresenham's line generation algorithm. 5

EITHER

3. (a) Explain scaling in detail. 5
- (b) What is Homogeneous coordinate system ? Explain in detail. 5

OR

- (c) Describe 2D geometric transformation. List basic 2D transformation. 5
- (d) Explain Rotation matrix for clockwise and anti-clockwise direction. 5

EITHER

4. (a) Explain Sutherland-Hodgman polygon clipping algorithm with suitable example. 5
- (b) Explain the window to viewport coordinate transformation and mapping. 5

OR

- (c) Explain Cohen Sutherland line clipping algorithm in detail. 5
- (d) Explain concave and convex polygon with suitable example. 5

5. Attempt all :

- (a) Write short note on DVST. 2½
- (b) What is ellipse ? List method for defining ellipse. 2½
- (c) Write short note on Translation. 2½
- (d) Discuss 4 bit outcode method for line clipping. 2½