Roll No. | | | | | | | | | | | | | **Total No. of Pages : 02**

Total No. of Questions : 07

BCA (Sem.–5)

COMPUTER GRAPHICS

Subject Code : UGCA-1934

M.Code : 90317

Date of Examination : 03-01-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

(a) What is the concept of 8-point symmetry in circle drawing algorithm?

(b) What are bitmaps?

(c) What is line clipping? Explain.

(d) Explain the working of the raster scan monitors.

(e) For large polygons the flood fill algorithm may fail, why? What could be the method to avoid this?

(f) Define Computer Graphics.

(g) What is aspect ratio? What is its importance?

(h) What do you mean by interlacing?

(i) Explain the concept of color lookup table.

(j) What is the need of homogeneous coordinates?

SECTION-B

2. (a) What are plasma panel displays? What are their advantages?

   (b) Explain the following devices :

      (i) image scanners

      (ii) plotters.

3. (a) Distinguish between random and raster scan systems

   (b) Show that the reflections in the line y = x and the line y = -x can be performed by a scaling operation followed by rotation.

4. What are the composite transformations? Explain them with an illustrative example.

5. Show why the Sutherland-Hodgman clipping algorithm will only work for convex clipping regions.

6. What are the differences between 2D & 3D graphics explain with example.

7. Write Bresenham's circle drawing algorithm with example.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.