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

Total No. of Questions : 07

B.Sc(Information Technology) (Sem.–5)

COMPUTER GRAPHICS

Subject Code : UGCA1934

M.Code : 90395

Date of Examination : 21-12-22

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 aspect ratio?

b) What do you mean by scan conversion?

c) What is viewing transformation?

d) What do you mean by Raster scan display?

e) What are homogeneous coordinates?

f) What is the centre of projection in perspective projection?

g) What is the concept of refreshing in the CRTs?

h) What does the acronym pixel stands for? What are the characteristics of a pixel?

i) What will be the change in the 3D rotation matrix if the rotation is clock-wise?

j) How the 3D images are represented on 2D plane in computer graphics?

SECTION-B

2. a) Distinguish between random and raster scan systems.

   b) What are the applications of Computer Graphics? Explain.

3. What are the differences between RGTB and CMY models? Explain in detail.

4. Write Bresenham's circle drawing algorithm.

5. Magnify the triangle P(0,0), Q(2,2) and R(0,4) to four times its size while keeping R(10,4) fixed.

6. What is clipping? Write an algorithm for it.

7. Explain the terms: Projection plane, view plane, coordinate and view volume with regards to 3D graphics. State and explain the anomalies of perspective projection.

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.