Roll No. .....

Y – 3107

M.Sc. (Fourth Semester) EXAMINATION, May/June-2021

COMPUTER SCIENCE

Paper – 402

COMPUTER GRAPHICS

Time : Three Hours

Maximum Marks : 85 *Minimum Pass Marks : 29*

Note—Attempt *all* questions.

Unit-I

1. (a) What is CRT ? Explain it with a diagram. Discuss its types.
   (b) Explain DVST. How it is different from CRT ? 17

Unit-II

2. (a) Explain the various color models in detail.
   (c) Describe Cohen Sutherland line clipping algorithm. 17

Unit-III

3. (a) Explain the steps used in rotation of 2D object about an arbitrary axis and hence derive the matrix for the same.
   (b) What do you understand by scaling a 2D object. Explain in detail. Coordinates points of a square are P(1,4), Q(4,4), R(4,1) & S(1,1). Scaling factor with X-axis = 3 & Y-axis is 4. Find the new coordinates after applying scaling. 17

Unit-IV

4 (a) What is the difference between parallel & perspective projections ? Describe an application, where each type of projection would be preferable.
   (b) What is oblique projection. Discuss its types. How it is different from isometric projection. 17

Unit-V

5 (a) What is Hermite cubic curves ? Discuss its properties & limitations of it.
   (b) Write short notes on ruled surface & cylindrical surface. 17