M.C.A. Semester:- 3 Examination November-2014

Paper Code:3608 Paper Title: Computer Graphics

Time: 02:30 Hours Marks: 70

Q1 Answer any FIVE from the following: [10]

a. Draw intensity distribution graph of phosphor dot on CRT screen.

b. What is shadow mask?

c. Draw the diagram illustrating shear effect on any 2D shape.

d. Write reflection matrix about X – axis.

e. What is RGB? Mention its significance.

f. Write down basic geometric line equation.

g. List various line attributes.

Q2 Answer any FIVE from the following: [15]

a. Briefly discuss advantages of computer graphics.

b. Write a brief note on joystick.

c. Briefly describe character attributes.

d. Describe point clipping conditions.

e. Draw 3D viewing pipeline and explain it.

f. List characteristics of raster refresh systems.

g. Explain the use of computer graphics in the area of animation.

Q3 Answer any FIVE from the following: [25]

a. Explain 3D display methods.

b. Explain basic 2D transformations.

c. Explain window to viewport transformation.

d. Explain the working of Cohen-Sutherland line clipping algorithm.

e. What is reflection? Explain reflection about various axis.

f. Explain DDA line drawing algorithm.

g. Explain ellipse drawing algorithm.

Q4 Answer any TWO from the following: [20]

a. Show that the composition of two rotations is additive by concatenating the matrix representations for $R(\theta_1)$ and $R(\theta_2)$ to obtain : $R(\theta_1).R(\theta_2) = R(\theta_1 + \theta_2)$

b. Illustrate the working of Bresenham's circle drawing algorithm with origin at(0,0) and radius r=10;

c. Describe area fill attributes.