2018

COMPUTER SCIENCE & TECHNOLOGY

CSIT--3.5

COMPUTER GRAPHICS

Full marks: 80

Time: 3 hours

The figures in the margin indicates full marks for the questions :

1. What is computer graphics? How are the pictures formed in raster scan display? 1+2=3
2. Explain about non-refresh display device. 5
3. Define pixel. Briefly describe about CRT with a diagram.

   or

   Briefly explain about liquid crystal display with a diagram. 1+6=7

4. Distinguish between them (any five):
   a. joystick and trackball
   b. PHIGS+ and PHIGS
   c. Flood fill and boundary fill algorithm
   d. Rotation and scaling
   e. General programming packages and special purpose programming packages
   f. Raster scan and random scan display
   g. Interactive and non interactive computer graphics 3X5=15
5. Explain how shadow mask method used to producing colour display on CRT. 5
6. What is scan line? Write about bitmap font. 2+2=4
7. Explain about Bresenham's line drawing algorithm.

   Or

   Consider the line with end point (20, 10) and (30, 18) and the line has a slope of 0.8. Then find successive pixel position along the line path from the decision parameters. 6

P.T.O.

8. Write the matrix form of composite translation transformation. What is affine transformation and give the examples of it. 2+1+2=5
9. Write about the steps of general fixed point scaling with diagrams. 4
10. Briefly explain about any one of 2D basic transformation. 6
11. Write the matrix forms of shear and reflection in different direction. 5
12. Write about window-to-viewport coordinate transformation.

Or

Explain about cohen-sutherland line clipping algorithm. 5
13. What is point clipping? Write about text clipping. 1+4=5
14. Write about 3D translation transformation.

Or

Write about parallel projection and perspective projection. 5

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