

16U427

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Name:

Reg. No.....

FOURTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2019

(CUCBCSS-UG)

CC17U BCA4 C08 - COMPUTER GRAPHICS

(Complementary Course)

(2017 Admission Regular)

Time: Three Hours

Maximum: 80 Marks

PART A

Answer *all* questions. Each question carries 1 mark.

1. The Cartesian slope-intercept equation for a straight line is
2. Define Pixel.
3. Define Persistence.
4. Expansion of DDA
5. Name a subtractive color model.
6. is a rigid body transformation that moves objects without deformation
7. The number of pixels stored in the frame buffer of a graphics system is known as
8. List the range of visible light.
9. Beam penetration method is usually used in
10. The color code "000" is for

(10 x 1 = 10 Marks)

PART B

Answer *all* questions. Each question carries 2 marks.

11. Differentiate Random scan and Raster scan.
12. Explain Clipping.
13. What is homogenous co-ordinate system?
14. Write equation for window to viewport transformation.
15. State the basic principle of LCD.
16. Define window and viewport.
17. Explain 2D translation. Give matrix formulation of translation.
18. What is frame buffer?

(8 x 2 = 16 Marks)

PART C

Answer any *six* questions. Each question carries 4 marks.

19. Explain RGB model.
20. Explain the shadow mask method for color generation in raster scan system.
21. Explain the rotation and scaling geometric transformations.
22. Explain Scan Line Polygon filling algorithm in detail.
23. Explain DDA algorithm.
24. Explain reflection and shear.
25. Explain window to viewport transformation.
26. Write note on GIMP
27. Explain any line clipping algorithm.

(6 x 4 = 24 Marks)

PART D

Answer any *three* questions. Each question carries 10 marks.

28. Describe applications of computer graphics in detail.
29. Elaborate on scan line polygon filling algorithm.
30. Enumerate on Bresenham's Circle generating algorithm with example.
31. Elucidate Cohen-Sutherland Line Clipping algorithm.
32. Write in detail about homogenous co-ordinate system.

(3 x 10 = 30 Marks)
