BANKURA UNIVERSITY

(B.Sc.) 6th Semester (Honours) Examination, 2021

Subject: Computer Science

Course ID: 61512   **Course Code: SH/CSC/602/C-14**

Course Title: COMPUTER GRAPHICS

Full Marks: 25   **Time: 1 Hr 15 Mins**

The figures in the margin indicate full marks

Answer all the questions.

UNIT - I

1. **Answer *any Five* of the following questions:**   **(1 x 5 = 5)**

   a) Define refresh rate of a CRT monitor.

   b) What are the advantages of using LCD monitor than to use CRT monitor.

   c) What is pixel?

   d) What is the role of electron gun in a CRT monitor?

   e) What is 3D transformation?

   f) What is reflection in 2D graphics?

   g) Define composite transformation.

   h) What is fixed point scaling?

UNIT - II

2. **Answer *any two* of the following questions:**   **(2 x 5 = 10)**

   a) What is 4 connected region? Write down the boundary fill algorithm.   1+4

   b) Write down the Bresenham's line drawing algorithm. Using this algorithm find out points of

   a line with end points (1, 4) and (4, 5).   3+2

   c) What is 2D translation? Obtain the composite transformation matrix for general fixed point

   scaling.   1+4

d) Define Bezier curve. Write some characteristics of this curve. 2+3

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UNIT – III

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3. **Answer *any one* of the following questions:** **(1x10=10)**

a) Explain the working principle of a color CRT monitor using :-

    I.   Beam penetration method.

    II.   Shadow-Mask method 5x2=10

b) Develop Cohen-Sutherland line clipping algorithm.