JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

MAKEUP EXAMINATION- 2016

B.Tech

COURSE CODE: 11B1WCI6.1   MAX. MARKS: 25

COURSE NAME: Computer Graphics

COURSE CREDITS: 4   MAX. TIME: 1Hr 30 Min

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.

Q1:   **[6 marks]**

   a) What are the hardware devices used for computer graphics?
   b) Define Random and Raster scan displays?
   c) What is Pixel and Aspect ratio?
   d) Write short note on Color CRT Monitor. Explain Shadow Mask Method.

Q2: Develop the Bresenham's line drawing to draw lines of any scope. Compare this with the DDA Algorithm?   **[4 marks]**

Q3: What is the size of a pixel on a 21"-inch diagonal screen with physical aspect ratio 8:5 operating in 1152 x 800 mode?   **[3 marks]**

Q4: Give the transformation that maps the square (0,0)-(1,0)-(1,1)-(0,1) into the trapezoid (0,0)-(1,0)-(0.75,1)-(0.25,1).   **[3 marks]**

Q5: Illustrate the best-case and worst-case situations(with example) for line clipping using (a) the CohenSutherland algorithm and (b) the Liang-Barsky algorithm.   **[5 marks]**

Q6: Apply Nicholl lee Nicholl line clipping algorithm on the line P1 (-1, -2), P2 (2, 4) on the clipping window XL = 0, XR = 1, YB = 0, YT = 1   **[4 marks]**