SF-227

Seat No.	

Total No. of Pages : 2

T.E. (Computer Science & Engineering) (Semester-V)
(Revised) Examination, November - 2017
COMPUTER GRAPHICS (Theory)
Sub. Code : 66293

Day and Date : Thursday, 09-11-2017 **Total Marks : 50**
Time : 9.30 a.m. to 11.30 a.m.

Instructions :
1) **Q. No. 3 and Q. No. 6 are compulsory. Attempt any one from Q. No. 1 and Q. No. 2 and any one from Q. No. 4 and Q. No. 5.**
2) **Figures to the right indicate full marks.**
3) **Assume suitable data if necessary.**

Q1) a) What is scaling? Explain in detail 2D scaling transformation. **[6]**

b) Write and explain Bresenham's line drawing algorithm in first octant. **[6]**

Q2) a) Explain in detail the rotation of object about the arbitrary axis in space. **[6]**

b) Explain Run Length Encoding (RLE) scan conversion method. **[6]**

Q3) a) Explain midpoint subdivision algorithm for line clipping with example. **[7]**

b) Write a note on windowing and view porting. **[6]**

Q4) a) Explain parametric representation of cubic spline curve segment. **[6]**

b) What is key frame animation? Explain different methods of key frame animation. **[6]**

P.T.O.

Q5) a) Explain diffuse reflection model for calculating surface intensity at a given point. **[6]**

b) What is halftoning. Explain halftone approximation method for a 3 by 3 pixel grid on a bilevel system. **[6]**

Q6) a) Explain Warnock algorithm for hidden surface removal. **[7]**

b) What is warping? Explain feature-based image warping method. **[6]**