

SF-227

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Seat No.	
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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]

