W-1004

Total No. of Pages : 2

Seat No.	

T.E. (Computer Science & Engineering) (Semester - V) (Revised) Examination, June - 2014

COMPUTER GRAPHICS (New)

Sub. Code : 45601

Day and Date : Tuesday, 03 - 06 - 2014 **Total Marks : 50**

Time : 1.30 p.m. to 3.30 p.m.

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

SECTION - I

Q1) a) Explain in detail working of Calligraphic refresh graphics displays. **[6]**

b) Explain the concepts of multiple transformations. Give mathematical expressions. **[6]**

Q2) a) Prove with example two pure reflection transformations are applied successively, the result is a pure rotation. **[6]**

b) What is affine and perspective geometry? Differentiate parallel and perspective projections. **[6]**

Q3) a) Why fence fill is better than edge fill? Explain Edge fill algorithm. State advantages and disadvantages. **[7]**

b) What are the steps involved in Bresenham's line drawing algorithm for line (0, 0) to (–8, –5)? **[6]**

P.T.O.

SECTION - II

Q4) a) Explain the concepts of windowing and viewporting. [6]

b) What is clipping? Explain two dimensional window clipping technique. [6]

Q5) a) Explain different properties of Bezier curves. State its applications. [6]

b) Explain Warnock algorithm and state its applications. [6]

Q6) a) What is OpenGL? Explain with example how to draw poly-lines and polygons in OpenGL. [7]

b) Differentiate parametric and nonparametric representation of curves. [6]