

Exam. Code : 105706

Subject Code : 1472

B.Sc. (Information Technology) 6<sup>th</sup> Semester

COMPUTER GRAPHICS

Paper : I Opt. (i)

Time Allowed—3 Hours]

[Maximum Marks—75

**Note** :— Attempt *five* questions in all, selecting at least **one** question from each section. The **fifth** question may be attempted from any section. All questions carry equal marks.

**SECTION—A**

1. (a) What are the hardware and software requirements for Computer Graphics ?  
(b) Explain any two display devices. 7,8
2. How a line is created using computer graphics ? Explain with the help of an algorithm. 8,7

**SECTION—B**

3. What is a transformation ? How is a 2D transformation represented ? 3,12
4. What are composite transformations ? How are they different from simple transformations ? 6,9

### SECTION—C

5. What is the purpose of Scan line algorithm ? Explain the algorithm step by step. 8,7
6. Explain the Object space method for hidden surface removal. Explain its limitations. 12,3

### SECTION—D

7. What is a projection ? Explain the applications of projections. Do projections preserve straight line ? 5,5,5
8. Differentiate between parallel projection and perspective projection. How are projections available in a graphics package ? Explain with reference to any graphics software package that you have worked on. 8,4,3