Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 41153

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Sixth Semester

Computer Science and Engineering

080230030 – COMPUTER GRAPHICS

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Mention any four computer graphics software.

2. Specify the problem with multiple components in clipping.

3. Give an example for combined transformation on 2D with neat diagram.

4. State the geometric interpretation of homogeneous coordinates.

5. Write down the matrix representation of 3D translation.

6. List out the techniques for generating perspective views.

7. Represent a solid in octree method.

8. Categorize the visible-surface detection algorithms.

9. List the reflectance properties of surface.

10. What are OpenGL operations?

PART B — (5 × 16 = 80 marks)

11. (a) Discuss in detail about any four display technologies with neat diagram. (16)

Or

(b) Explain in detail about scan converting of Line, Circle and Ellipse. (16)

12. (a) Write down the matrix representation of 2D transformations. (16)

Or

(b) Illustrate the rotation about an arbitrary point and reflection through an arbitrary line with suitable examples. (16)

13. (a) Explain in detail about 3D scaling, shearing, rotation and reflection. (16)

Or

(b) Describe about various projections with neat diagram. (16)

14. (a) Give a comparison of various solid representations. (16)

Or

(b) Write Painter's algorithm and compare with BSP trees. (16)

15. (a) Discuss in detailed notes on illumination and shading models for polygons. (16)

Or

(b) (i) Why OpenGL? Write down the features of OpenGL. (8)

(ii) Write an example program on OpenGL and explain. (8)
