Code No.: 9A05503/R09

B.Tech. III Year II Semester Regular and Supplementary Examinations Set-1

April/May - 2013

COMPUTER GRAPHICS

(Information Technology)

Time: 3 Hours Max. Marks: 70

*Answer any **FIVE** Questions*

***All** Questions carry **equal** marks*

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1. (a) Discuss the functioning of joystick.
   (b) Explain the construction and functioning of shadow mask-CRT devices.

2. (a) What is aliasing? Explain different methods of minimizing its effect.
   (b) Explain the DDA algorithm for ellipse generation.

3. (a) What is meant by composite transformations?
   (b) If P(x, y, z) is an object reference point for scaling, explain how the scaling operation is defined in terms of scaling with respect to the origin.

4. (a) What is viewing? Discuss about multiple views with suitable example.
   (b) Elaborate on SPHIGS applications running in window-manager.

5. (a) Write algorithm for displaying a parametric cubic curve.
   (b) Explain briefly about quadric surfaces.

6. Write notes on the following,
   (a) Cell decomposition
   (b) Spatial occupancy enumeration
   (c) Octrees.

7. Explain the concept of chromatic color in detail.

8. (a) Outline the key ideas behind the radiosity equation for rendering. Radiosity is most useful for what kinds of scenes.
   (b) Describe how hidden surface removal and projection are integrated into the ray-tracing process.