Code: 9A05503

B.Tech IV Year I Semester (R09) Supplementary Examinations June 2017
COMPUTER GRAPHICS
(Computer Science & Systems Engineering)

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Explain the specifications of the graphics primitives.
   (b) What is the difference between raster scan CRT and random scan CRT?

2 (a) Discuss about various line style primitives.
   (b) What is multiple windowing? Explain the use of multiple windowing.

3 (a) What is meant by reflection? Derive the transformation matrices for reflection about the line y = -x and reflection about an arbitrary line y = x.
   (b) Enumerate the differences between 2D-graphics and 3D-graphics.

4   What is a structure network? What is the use of structure network in editing dynamic effects?

5   Explain the following:
   (a) Hermite surfaces.
   (b) Bezier surfaces.
   (c) B-spline surfaces.

6 (a) Explain the role of Boolean operators in solid modeling.
   (b) What are the applications of solid modeling system?

7   Write down the algorithm to convert HSV to RGB color model and hence describe the red color distribution principle in HSV color model.

8 (a) Describe briefly ray tracing technique for rendering an object.
   (b) What do you mean by shading model? Explain Phong shading model.

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