

Total No. of Questions : 10]

SEAT No. :

P2364

[Total No. of Pages : 2

[5254] - 697

B.E. (I.T.) End Sem.

ADVANCED GRAPHICS AND ANIMATION

(2012 Pattern) (Elective - III)

Time :2:30 hours]

[Max. Marks :70

Instructions to the candidates:

- 1) Solve Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
- 2) Figures to the right indicate full marks.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Assume suitable data, if necessary.*

- Q1)** a) Explain different 3D display methods. [5]
b) Define B - Spline surface. Which are the properties of B - Spline surface? [5]

OR

- Q2)** a) Explain the following quadratic surfaces [5]
Paraboloids
Cones
b) Discuss about the spatial partitioning Representations and Octree Representations. [5]

- Q3)** a) Write a short note on: [5]
Sweeping Representation.
b) Explain texture mapping with example. [5]

OR

- Q4)** a) Which are the different methods of shading? Explain any one in detail. [5]
b) Illustrate "Basic Ray tracing Algorithm". [5]

- Q5)** a) Explain Open GL drawing primitives [8]
b) List and explain the libraries used in the OpenGL. [8]

P.T.O.

OR

- Q6)** a) Explain phong lightning with suitable example with respect to OpenGL.[8]
b) Write a short note on: [8]
i) GLUT
ii) Open GL primitives.

- Q7)** a) List and explain various animation functions. [8]
b) Compare conventional and Computer assisted animation. [8]

OR

- Q8)** a) Which are the basic rules of animation? Explain with suitable example.[8]
b) Why control hierarchy is required in animation? Explain various methods of controlling animation. [8]

- Q9)** a) Explain the concept of collision detection and concept of surface deformation in case of physical modeling in virtual reality. [8]
b) What is meant by virtual reality? Describe any two VR architecture with neat diagram. [10]

OR

- Q10)**a) Write a short note on: [8]
Omegalib
b) Explain the various applications of virtual reality in the field of medicine. [10]

