

Total No. of Questions : 10]

SEAT No. :

**P3529**

**[4959]-1137**

[Total No. of Pages :2

**B.E.(Information Technology)**

**ADVANCED GRAPHICS AND ANIMATION**

**(2012 Pattern)(Elective-III)(End Sem) (Semester-II) (414463B)**

*Time :2½Hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Solve Q1 or Q2,Q3or Q4, Q5 or Q6 , Q 7 orQ 8, Q 9 or Q10.*
- 2) *Figures to right indicate full marks.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Assume suitable data if necessary.*

- Q1)** a) What is the importance of representing a curve in a parametric form?[5]
- b) Explain zero order, first order, and second order parametric continuity in detail. [5]

OR

- Q2)** a) Explain following quadratic surfaces. [5]
- i) Sphere
- ii) Torus
- b) What are sweep surfaces? Discuss different methods of generating sweep Surfaces. [5]
- Q3)** a) Explain in detail Spatial-partitioning representation along with its decomposition. [5]
- b) Write short note on “Constructive solid geometry” [5]

OR

- Q4)** a) Derive the simple illumination model. Include the contribution of Diffuse, ambient and specular reflection. [5]
- b) What are the various methods of retracing? [5]

**P.T.O.**

- Q5)** a) Explain pBuffer rendering with respect to Open GL. [8]  
b) How Fog stage is implemented in Open GL pipeline? [8]

OR

- Q6)** a) Which are the Shadowing Techniques with respect to OpenGL? Explain in brief. [8]  
b) Write a short note on “GLUT” [8]

- Q7)** a) What is meant by Animation Language? Explain the types of animation languages with appropriate examples. [8]  
b) What is meant by key-framing, tweening and morphing? [8]

OR

- Q8)** a) Explain various animation techniques. [8]  
b) Which are the different animation software’s? Explain any one animation software in detail. [8]

- Q9)** a) Which are the different languages used in Virtual Reality? Explain in brief. [8]  
b) What is the need of virtual reality? Explain with suitable example. [10]

OR

- Q10)** a) Explain Flight simulation application and different virtual reality devices used in it. [8]  
b) What is virtual reality? Explain in detail forms of virtual reality. [10]

