

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

**ADVANCED GRAPHICS**

**(2008 Pattern) (Semester - II) (Elective - III) (414450 C)**

*Time : 3 Hours]*

*[Max. Marks :100*

*Instructions to the candidates:*

- 1) Answer question 1 or 2, 3 or 4, 5 or 6 from Section - I and question 7 or 8, 9 or 10, 11 or 12 from Section - II.*
- 2) Answers to the two sections should be written in separate answer books.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right side indicate full marks.*
- 5) Assume Suitable data if necessary.*

**SECTION-I**

- Q1)** a) Compare and contrast parallel projection and perspective projection 3D display methods. [6]
- b) Explain following quadratic surfaces. [6]
- i) Ellipsoid. ii) Torus.
- c) What is Spline? What are the major differences between Bezier curve and B-Spline. [6]

OR

- Q2)** a) Explain Surface Rendering and polygon surfaces in detail. [6]
- b) Explain the issues related to three dimensional display methods. [6]
- c) Explain polygon table and geometric data representation with suitable example. [6]

- Q3)** a) Explain various animation techniques. [8]
- b) What is meant by key-framing, tweening and morphing with suitable example? [8]

OR

**P.T.O.**



- Q10)**a) Define Illumination model. Discuss the basic components of illumination model. [8]
- b) Explain Illumination W.R.T. ambience, Specular reflection and diffuse reflection. [8]

- Q11)**a) Explain the factors affecting the design of virtual reality system. [8]
- b) What is meant by virtual reality system? Explain the applications of virtual reality system. [8]

OR

- Q12)**a) Explain in brief various issues with design and implementation of a VR system. [8]
- b) What is VRML? Describe the basic structure of a VRML file. [8]

