Friday, May 31, 2019   02:30 pm - 05:30 pm   1T01225 - T.E. (INFORMATION TECHNOLOGY) (Sem V)
(Choice Based) / 32409 - Elective I : Computer Grahics & Virtual Reality 66973

(3 Hours)   **[Total Marks: 80]**

NB : 1) **Question 1** is **compulsory**.
2) Attempt any **three** questions from the **remaining** questions.
3) **Assume** suitable **data** wherever applicable.
4) **Draw figures** wherever applicable.

1	(a)	Explain different applications of computer graphics.	5
	(b)	Explain different types of virtual reality systems.	5
	(c)	Prove that two successive rotation are additive.	5
	(d)	Explain fractals	5

2 (a) Explain Virtual reality architecture.   10

(b) Explain Bresenham's line drawing algorithm. Explain how it is different   10
from DDA

3 (a) Find the Bézier curve given 4 control points (25,25), (45,40), (60,45) and   10
(90,10) using the step size as 0.1.

(b) List various polygon filling algorithms and explain boundary fill in detail.   10

4 (a) Explain geometric and kinematic modeling in detail   10

(b) Explain Sutherland Hodgeman polygon clipping algorithm.   10

5 (a) Explain 3D transformations with suitable example for each.   10

(b) Explain Liang Barsky line clipping algorithm with example.   10

6   Write short note on (any four)   20

(a) Antialiasing techniques

(b) Application of Virtual Reality

(c) Text Clipping

(d) VR toolkit

(e) Morphing techniques

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