Code No: R1621056 **R16** SET - 1

II B. Tech I Semester Supplementary Examinations, January - 2023
COMPUTER GRAPHICS
(CSE)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B)**
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A (Marks:14)

1.	a)	Differentiate window and viewport.	3M
	b)	State the properties of B spline approximations.	2M
	c)	Write about the primary and secondary colors.	3M
	d)	List the problems with interpolated shading methods.	2M
	e)	When curves are said to be statistically self-similar?	2M
	f)	Define environment array.	2M

PART –B (Marks: 4x14=56)

2.	a)	Briefly explain Bresenham's line drawing algorithm with its advantages and disadvantages.	7M
	b)	Explain the following reflection in brief: (i) Reflection of an object about the x- axis (ii) Reflection of an object about the y axis Reflection axis as the diagonal line y = x.	7M
3.	a)	Explain basic 3D transformations.	7M
	b)	Explain an algorithm for the generation of B-spline.	7M
4.	a)	Explain in detail about the methods of controlling animation.	7M
	b)	Explain in detail YIQ color model.	7M
5.	a)	Compare and contrast between flat and smooth shading models with necessary examples.	7M
	b	Explain the implementation of a two-pass object-precision shadow algorithm.	7M
6.	a)	Describe the Creation of images by iterated functions.	7M
	b)	Describe Mandelbrot sets.	7M
7.	a)	Explain various Boolean operations on compounded objects.	7M
	b)	Discuss the intersecting rays with a Cube or any convex polyhedron.	7M
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