DIVISION OF COMPUTER ENGINEERING

SCHOOL OF ENGINEERING

B.TECH DEGREE I INTERNAL EXAMINATION October 2023

Semester V Course Title: CS19- 202- 0504 Computer Graphics

Faculty: Dr. Latha R. Nair

Time: 2Hrs | Max. Marks: 50

On completion of this course the student will be able to:

Explain the organisation of an interactive computer graphics system

CO1: Generate 2D and 3D geometrical objects.

CO2: Explain the important transformations on graphical objects

CO3: Fill a region given boundary and clip lines and polygons against a rectangular boundary.

CO4: Apply the operations like projections and rendering for 3D picture generation.

CO5: Apply the operations like projections and rendering for 3D picture generation.

CO6: Design graphical objects.

CO7:Design interactive graphics systems and animation systems

Part A (Answer All Questions) (5 x 4 = 20)

			CO	BL
I.	a.	i)Compare raster scan and random scan display device in terms of resolution, type of pictures and the display process 2.5 marks ii) Define frame buffer, resolution and aspect ratio of a raster scan display device 2.5 marks	CO2	1
	b.	i) Compare flood fill , boundary fill and scanline fill with respect to the shapes that can be filled 2 .5marks ii) How scanline fill algorithm can be speeded up? 2.5 marks	CO2	2
	c.	Write the transformation matrices for two translations in sequence, two rotations in sequence and two scaling in sequence. 5 marks	CO2	2
	d.	Design a clock choosing suitable primitives and coordinates. Draw the clock according to scale. What transformation can be used to move the needles? 5 marks	CO6	4

Part B (Answer Any Three Questions) (3 x 10 = 30)