CLASS: BTECH   SEMESTER : VI
BRANCH: IT   SESSION : SP/2024

SUBJECT: CS431COMPUTER GRAPHICS

TIME: 02 Hours   FULL MARKS: 25

INSTRUCTIONS:
1. The question paper contains 5 questions each of 5 marks and total 25 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates

----

			CO	BL
Q.1(a)	What is persistence?	[2]	1	1
Q.1(b)	Explain how Julia Sets helps in CG.	[3]	2	2
Q.2(a)	What are Recursively defined Drawings. Explain with an Example.	[2]	2	1
Q.2(b)	A picture has a resolution of 1024X1280 with each of the three colors being represented by 8-bit plans each. What is the storage requirement for a 10 second animation of the above picture with 30 frames per second? If the compression ratio is 5:1 what is the storage requirement?	[3]	1	1
Q.3(a)	What are the steps required to scan convert a sector using the trigonometric method?	[2]	3	1
Q.3(b)	Write the Midpoint Scan line algorithm for the slope is between 0^0 to 45^0.	[3]	3	3
Q.4(a)	Derive the X Shear transformation from the rotation and scaling transformations.	[2]	4	2
Q.4(b)	Prove that if two points are translated then the entire line is translated.	[3]	4	3
Q.5(a)	Find the relationship between the rotations R_θ , $R_{-\theta}$ and R_θ^{-1} .	[2]	5	3
Q.5(b)	Magnify the triangle with vertices A (0,0), B(1,1) and C(5,2) to twice its size while keeping C(5,2) fixed. Find the new coordinates after the transformation.	[3]	5	3

::::::23/02/2024::::::M