Total No. of Printed Pages: 2

PRN No.	

PAPER CODE	U313-235-A-ESE

DECEMBER 2023 (ENDSEM) EXAM
TY B.TECH (SEMESTER - I)
COURSE NAME: PROFESSOINAL ELECTIVE-1 BRANCH: COMPUTER COURSE CODE: CSUA31205A
COMPUTER GRAPHICS

(PATTERN 2020)

Time: [1Hr. 30 Min] **[Max. Marks: 40]**

Instructions to candidates:

1) **Figures to the right indicate full marks.**
2) **Use of scientific calculator is allowed**
3) **Use suitable data wherever required**
4) **All questions are compulsory. Solve any one sub question from Question 3 and any two sub questions each from Questions 4, 5 and 6 respectively.**

Q. No.	Question Description	Max. Marks	CO mapped	BT Level
Q.1	a) What is display file structure? Why display file interpreter used?	[2]	1	Understand
Q2	a) In 2D clipping how are line grouped into visible, invisible and partially clipped categories?	[2]	2	Apply
Q3.	a) Describe a Process of Polygon clipping using Sutherland Hodgeman method with Suitable Examples?	[6]	2	Apply
	b) Obtain the 3D Transformation matrices for Translation, Scaling and Rotation about the Arbitrary axis? Rotate a Square ABCD by 45° anticlockwise direction having co-ordinates A(1,0), B(0, 0), C(0,1), D(1,1).	[6]	3	Apply
Q.4	a)Describe Light Sources, Ambient Light, Diffuse reflection, Specular Reflection with suitable examples ?	[5]	4	Apply
	b) Explain stepwise Gourand Shading algorithm with suitable examples?	[5]	4	Apply
	c) Describe Area subdivision algorithms with Suitable examples?	[5]	4	Apply
Q.5	a) Describe is segment? Illustrate any 3 segment operation	[5	5	Apply
	b) Demonstrate Animation language with examples?	[5]	5	Apply
	c) Describe different component and uses of Maya	[5]	5	Apply

	Software?			
Q.6)	a) What are the Properties of Bezier Curve? Describe the procedure to generate Bezier Curve	[5]	6	Understand
	b) Explain B-Spline techniques for generating curve with Examples	[5]	6	Understand
	c) Explain Hilbert curve in details with Suitable examples?	[5]	6	Understand