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Reg No.:_____ Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2017

Course Code: IT367

Course Name: COMPUTER GRAPHICS AND MULTIMEDIA (IT)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1	a)	Compare DDA line drawing algorithm with Bresenham's algorithm.	(3)
	b)	Explain H.261 Compression technique.	(5)
	c)	Illustrate Bresenham's line drawing algorithm with endpoints (20,10) and (30,18)	(7)
2	a)	Derive the decision parameter in midpoint circle drawing algorithm and write the algorithm.	(8)
	b)	Explain with figure JPEG compression technique.	(7)
3	a)	Explain Boundary fill polygon filling algorithm.	(5)
	b)	What is DVI? What are the basic techniques used for motion video encoding?	(5)
	c)	Classify different types of source/entropy& hybrid coding techniques.	(5)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	With a neat sketch explain the working principle of CRT.	(6)
	b)	Translate the square ABCD whose coordinates are A (0,0) B(3,0) C(3,3) and D(0,3) by 2 units in both directions and then scale it by 1.5 units in x-direction and 0.5 units in y-direction.	(6)
	c)	Write short notes on E-Paper displays.	(3)
5	a)	Write the basic transformations with homogeneous matrix representations.	(8)
	b)	Explain OLED Displays. How it differs from LED?	(7)
6	a)	Show that transformation matrix for reflection about y=x is equivalent to reflection relative to y axis followed by counterclockwise rotation of 90 degrees.	(4)
	b)	Magnify the triangle with vertices A0, 0) B (1, 1) C (5, 2) to twice its size while keeping C (5, 2) fixed.	(5)
	c)	Differentiate between LCD and PLASMA displays.	(6)

PART C

Answer any two full questions, each carries 20 marks.

7	a)	What is clipping? Describe Cohen Sutherland line clipping algorithm.	(10)
	b)	What is image segmentation?	(4)
	c)	Compare Z Buffer algorithm and A-Buffer algorithm.	(6)
8	a)	Describe Sutherland Hodgeman Polygon clipping algorithm with an example.	(10)
	b)	What is the histogram equalization?	(5)
	c)	Explain the depth buffer method.	(5)
9	a)	Write an example of 3D composite transformation.	(4)
	b)	Write down the homogeneous matrix representations of 3D reflection and shear.	(6)
	c)	Explain the following	(10)

i) Painter's algorithm. ii) Scan line algorithm.

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