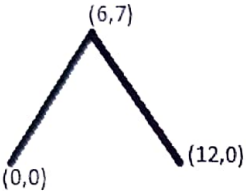


**VIT**Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)**School of Computer Science and Engineering****Fall Semester 2024-25****CAT I****SLOT: B1+TB1****Programme Name & Branch: Integrated M.Tech (5 year), MIC/MID****Course Name & Code: CSI 3011 & Computer Graphics and Multimedia****Class Number (s): 1832/1838/1851****Faculty Name (s): Dr. Arpan Garai , Dr. Ebenezer Juliet S, Dr. Gayathri S.****Exam Duration: 90 Min.****Maximum Marks: 50****General instruction(s):****Answer all questions**

Q.No.	Question	Max Marks
1.	(a) Explain the following with proper examples: (4 marks) (i) Resolution (ii) Aspect Ratio (b) Illustrate the working of CRT using necessary diagrams. (6 marks)	10
2.	(a) Describe any three color models that are commonly used in computer graphics (6 marks) (b) Find the corresponding CMY value for the RGB color co-ordinates (0.2,0.5,1). (4 marks)	10
3.	(a) Trace out the following figure after finding all the points [A(0,0);B(6,7);(12,0)] using DDA line drawing algorithm. (provide step – by- step process) (8 marks)	10

	 <p>(b) Explain your observations in the figure drawn using DDA algorithm. How it can be resolved? (2 marks)</p>	
4.	<p>(a) Draw 8-way symmetry of circle and mention all the co-ordinates. (2 marks)</p> <p>(b) Explain mid-point circle drawing algorithms and illustrate the step – by – step procedure to draw a circle centered at (15,15) with radius 7. (find all the points for any 1 quadrant) (8 marks)</p>	10
5.	<p>(a) Why homogeneous co-ordinate representation is required in transformations? (2 marks)</p> <p>(b) Apply composite transformation method to rotate a square placed at O(0, 0), B(5, 0), C(5, 5), D(0, 5) by an angle 90° with respect to point (2,2). Draw the original square and the transformed square. (8 marks)</p>	10
