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GIET UNIVERSITY, GUNUPUR – 765022
M. C. A (Fourth Semester) Examinations, May' 2021
MCA402 – Computer Graphics and Multimedia

Time: 2 hrs

Maximum: 50 Marks

The figures in the right hand margin indicate marks.

PART – A**(2 x 10 = 20 Marks)**Q.1. Answer **ALL** questions

- a. What is the role of computer graphics in animation?
- b. List the various input and output devices used in computer graphics.
- c. How is colour represented in computer graphics?
- d. What is inside-outside test in computer graphics?
- e. What is anti-aliasing? How is it useful?
- f. Define shearing in computer graphics.
- g. Distinguish between a window and a viewport.
- h. Write down the matrix for rotating a point about the Y-axis in 3D.
- i. Write the importance of animation in multimedia.
- j. What is the main function of a sound card?

PART – B**(6 x 5 = 30 Marks)**Answer **ANY FIVE** questions

Marks

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| 2. What is computer graphics? Explain how the interactive computer graphics works. | 6 |
| 3. Explain why the Bresenham's algorithm is better than DDA algorithm? | 6 |
| 4. Explain boundary fill algorithm for a polygon with the help of suitable example. | 6 |
| 5. Derive the viewing transformation that maps a window in world coordinates with x extent 1 to 5 and y extent 1 to 10 onto normalized viewport. | 6 |
| 6. What do you mean by clipping? Write the Sutherland-Cohen line clipping algorithm. | 6 |
| 7. Discuss the various multimedia authoring tools used in multimedia? | 6 |
| 8. Discuss the uses of MatLab in computer graphics. | 6 |
| 9. Explain how audio and video are used for multimedia. | 6 |

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