Reg.No. \_\_\_\_\_\_\_\_\_\_\_\_

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**End Semester Examination – Nov/Dec – 2018**

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| **Code** | **:14MT2005** | **Duration :** | **3hrs** |
| **Sub. Name** | **:GRAPHICS AND ANIMATION** | **Max. marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Describe the evolution of Graphics from its early inception to where it is right now. | CO2 | 10 |
| b. | With diagrams explain the 2 types of curves available to create organic shapes in Computer graphics. | CO2 | 10 |
| (OR) | | | | |
| 2. | a. | Differentiate Raster from Vector graphics. | CO2 | 4 |
| b. | Explain the various Animation Interpolation types? | CO1 | 6 |
| c. | With sample code explain the various types of transitions in Javafx. | CO3 | 10 |
|  |  |  |  |  |
| 3. | a. | Differentiate Convex from concave polygons and explain the test the computer uses to find whether a polygon is concave or covex. | CO2 | 5 |
|  | b. | Recall the various 2D transformations used for 2D animation. | CO2 | 5 |
|  | c. | Describe with examples and applications the RGB and HSV Colour Models. | CO3 | 10 |
| (OR) | | | | |  | With an example explain ADSR. |
| 4. | a. | Using Cohen Sutherland Line Clipping deduce what should happen to the line (4,5) to (4,8), given the lower left bound of your display is (2,2) and upper right bound is (7,7). | CO1 | 10 |
|  | b. | Describe the working of Cohen Sutherland line Clipping algorithm. | CO3 | 10 |
|  |  |  |  |  |
| 5. | a. | What is Aliasing? Explain the various processes of handling it in computer graphics. | CO3 | 14 |
|  | b. | Describe the parameters associated with lines that can be changed to change the look of lines created in computer graphics. | CO3 | 6 |
| (OR) | | | | |
| 6. | a. | List and describe the main font parameters that are used in typographic design. | CO1 | 10 |
|  | b. | Differentiate Serif from Sans-Serif font with examples. | CO1 | 4 |
|  | c. | Describe the process of Filling 2D Shapes with colours. | CO3 | 6 |
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| 7. | a. | Explain how the amount of light a surface receives is calculated in 3D Software. | CO2 | 10 |
|  | b. | Recall the various 3D transformations and list their importance in Computer graphics. | CO3 | 10 |
| (OR) | | | | |  | What was the initial application of the vocoder? |
| 8. | a. | List the various basic Light and Material types available in Graphics libraries to simulate real world objects. | CO1 | 15 |
|  | b. | Explain how backface culling is used reduce the rendering load on processors. | CO3 | 5 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Describe how collision detection between 2D shapes happens in computer graphics. | CO3 | 10 |
|  | b. | Describe the Depth perception principles that help human beings perceive depth. | CO2 | 10 |