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



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17MT2005** | **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. |  | Outline the early History of Graphics and Animation with its major milestones till the present day. | CO1 | 20 |
| **(OR)** | | | | |
| 2. |  | Describe the basic 2D transformations available in computer graphics. List down all their homogenous matrices. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Elaborate on the working of Cohen Sutherland algorithm with an example. | CO2 | 10 |
| b. | With diagrams explain the various interpolation types used in animation. | CO3 | 5 |
| **(OR)** | | | | |
| 4. | a. | With sample diagrams, list and explain the working of various 2D Collision Detection Techniques used in Graphics. | CO2 | 15 |
| b. | Explain the working of the Boolean operations in content creation in computer graphics. | CO3 | 5 |
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| 5. | a. | List down the various geometric primitives available in graphics API along with their parameters that can be changed. | CO3 | 8 |
| b. | Explain the application of a Scenegraph in making a complex scene. | CO2 | 8 |
| c. | Draw the RGB Color Cube and Name its corners. | CO3 | 4 |
| **(OR)** | | | | |
| 6. | a. | Using diagrams demonstrate the process of calculating the amount of light falling on a surface. | CO4 | 8 |
| b. | List and Explain the various types of Basic Shaders and Lights with their applications. | CO4 | 12 |
|  |  |  |  |  |
| 7. | a. | With an example demonstrate the process of Culling polygons that are not required in 3D. | CO3 | 14 |
| b. | Explain the working of Painters algorithm. | CO2 | 6 |
| **(OR)** | | | | |
| 8. |  | List and describe the various ways in which humans perceive Depth. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Recall the various Blend Modes and groups and their general working. | CO3 | 14 |
| b. | Explain the basic working of a Stereoscopic Movie and how it creates the feeling of depth for the audience. | CO6 | 6 |