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



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

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| **Code :** | **14MT2043** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MOTION CAPTURE** | **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. | Discuss the different types of MoCap systems technology in detail and mention their pros and cons. | CO2 | 16 |
| b. | Illustrate the cleaning and editing of MoCap data. | CO1 | 4 |
| **(OR)** | | | | |
| 2. | a. | Define occlusions in motion capture. | CO1 | 4 |
| b. | Elucidate in detail the overview and history of motion capture, its technologies and applications. | CO1 | 16 |
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| 3. | a. | Illustrate Animatics in MoCap. | CO1 | 6 |
| b. | Explain Rotoscoping in motion capture. | CO3 | 4 |
| c. | Identify the usage of zoopraxiscope. | CO2 | 4 |
| d. | Estimate how motions are applied to a 3D character. | CO1 | 6 |
| **(OR)** | | | | |
| 4. | a. | Explain in detail the importance of preproduction and pre-capture planning in motion capture. | CO3 | 16 |
| b. | Discuss on Facial Data Editing. | CO1 | 4 |
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| 5. | a. | Outline on skeletal editing in MoCap. | CO2 | 8 |
| b. | Compare and contrast forward and inverse kinematics. | CO1 | 12 |
| **(OR)** | | | | |
| 6. | a. | Illustrate Quaternions in MoCap math. | CO1 | 5 |
| b. | Summarize the need for retargeting. | CO1 | 5 |
| c. | Infer on the data types and formats for MoCap data. | CO2 | 10 |
|  |  |  |  |  |
| 7. | a. | Demonstrate how occlusions in markers can be reduced during motion capture sessions. | CO1 | 4 |
| b. | Discuss on rendering and post-production in Mocap. | CO2 | 7 |
| c. | Explain directory structure and file naming convention in MoCap | CO3 | 9 |
| **(OR)** | | | | |
| 8. | a. | Explain the features and services to look for in selecting a Motion Capture Studio. | CO1 | 10 |
| b. | Elaborate on stunt coordination, directing and the final preparations before the MoCap session. | CO2 | 10 |
|  | | **Compulsory**: |  |  |
| 9. |  | Elucidate on the methods involved in Computer vision-based control of 3D face animation for Facial Motion Capture. | CO3 | 20 |