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



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

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|  |  |  |  |
| **Code :** | **17MT2035** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ANIMATRONICS** | **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. | Identify the technology behind the movie, ‘ Extra Terrestrial’. | CO1 | 5 |
| b. | Discuss on the application of animatronics in the movie ‘Jaws’. | CO1 | 15 |
| **(OR)** | | | | |
| 2. | a. | Identify the technology behind the movie ‘King Kong’ . | CO1 | 5 |
| b. | Appraise on the animatronic robot in the movie ‘Aliens’. | CO1 | 15 |
|  |  |  |  |  |
| 3. | a. | List out the basic category of actuators. | CO2 | 5 |
| b. | List out and explain the application of Sensors and Actuators in Automobile application. | CO3 | 15 |
| **(OR)** | | | | |
| 4. | a. | List out the basic category of sensors. | CO2 | 5 |
| b. | Illustrate and explain a feedback controlled system with example. | CO3 | 15 |
|  |  |  |  |  |
| 5. | a. | State the principle of Quantizing. | CO2 | 5 |
| b. | Explain with illustration on microcontroller design issues. | CO3 | 15 |
| **(OR)** | | | | |  | | | |  | (OR) |
| 6. | a. | Elaborate the process of time to digital conversion. | CO2 | 5 |
| b. | Design an animatronics system with the required modules for a robotic hand and leg movement application. | CO6 | 15 |
|  |  |  |  |  |
| 7. |  | Differentiate the working of the following sensors with illustration.   1. Potentiometers. 2. Piezo-Electric. | CO2 | 10  10 |
| **(OR)** | | | | |  |  |  |
| 8. |  | Differentiate between the working of the following sensors with illustration.   1. Fiber-Optic. 2. Electromagnetic. | CO2 | 10  10 |
|  | | **Compulsory**: |  |  |
| 9. |  | Elaborate in detail the Kinect sensor working with illustration. What was the drawback in kinect sensor series? | CO2 | 20 |