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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **14EE2020** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Automotive Electronics** | **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. | With a block diagram explain the basic sensor arrangement in an automotive system | CO1 | 20 | |
| **(OR)** | | | | | |
| 2. | a. | Explain how the air pressure is sensed in the vehicle. Also discuss about the influence of change in air pressure on the performance of the vehicle | CO2 | 20 | |
| 3. | a. | Explain with a neat sketch the following actuators  a) Stepper Motor b) Linear Actuator | CO2 | 20 | |
| **(OR)** | | | | | |
| 4. | a. | Elaborate the role of power electronic converters that are used for digitizing the ignition system. Justify the merits of the same | CO1 | | 20 |
| 5. | a. | Explain the various components of a starting system with relevant diagram and the principle of operation of a cranking motor | C01 | | 20 |
| **(OR)** | | | | | |
| 6. | a. | Elaborately comment on the following automotive systems  a) ADIS b) ABS | CO3 | | 20 |
| 7. | a. | Discuss the various steps that are involved in developing a wireless TPMS. Discuss about the impact of TPMS created over the vehicle performance. | CO3 | | 20 |
| **(OR)** | | | | | |
| 8. | a. | With a neat block diagram explain the operation and advantage of Electronics Steering system | C03 | | 20 |
|  | | **Compulsory:** |  | |  |
| 9. | a. | Explain the working of fuel metering system with arelevant diagram. How the change in throttle affects the operation of the fuel pump. | CO1 | | 20 |

ALL THE BEST