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 – April/May– 2017**

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| **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. | Sketch and elaborate the digital technique in measuring the speed of the vehicle. | CO3 | 14 |
| b. | Explain the working of a relay with a diagram. | CO1 | 6 |
| (OR) | | | | |
| 2. | a. | With a neat diagram discuss the operation of an engine control system, its various measurents and control signals. | CO2 | 15 |
| b. | Define stoichiometric ratio and its value for perfect, lean and rich mixtures. | CO2 | 5 |
| 3. |  | Classify and elaborate the various components in a starting system with relevant diagramand the principle of operation of a cranking motor. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Discuss in detail about Integrated Engine Control System and its advantages. | CO2 | 20 |
| 5. |  | Assess the behaviour of a magneto and battery operated ignition systems. Provide suitable sketch for the same. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Appraise electronic Ignition system adopted for SI engines. Explain its operation with a neat sketch. | CO2 | 20 |
| 7. | a. | Describe about Head light & Side light. Also give details of Head light dazzling and preventive methods. | CO3 | 15 |
|  | b. | List the demerits of distributor less ignition system. | CO2 | 5 |
| (OR) | | | | |
| 8. | a. | Sketch and discuss on the design and working of a horn. | CO3 | 10 |
|  | b. | Infer the construction and operation of a balancing type oil gaugewith neat sketch. | CO1 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | With a neat diagram discuss about the Electronic Steering system. How this system supports the driving operation? | CO3 | 15 |
|  | b. | List the advantages of navigation system used in vehicle. | CO2 | 5 |

**ALL THE BEST**