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**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

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

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

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **Automotive Electronics** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **09EE208/11EE240/11EE249/12EE239/EE294** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | The resistance of a Thermistor varies inversely with\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 2. | Output voltage of the Zirconia sensor \_\_\_\_\_\_\_\_\_\_ with the increases with oxygen level in the exhaust | (1) |
| 3. | Shunt motor cannot be used for cranking the engine due to \_\_\_\_\_\_\_\_\_ | (1) |
| 4. | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ sensor is used in fuel metering. | (1) |
| 5. | Magneto ignition system battery is present : True / False | (1) |
| 6. | Knocking is also known as \_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 7. | \_\_\_\_\_ is required for multi cylinder engine for providing sufficient voltage to the spark plugs. | (1) |
| 8. | Give an example for electronic controlled brakes. | (1) |
| 9. | What are the two types of fuel pumps? | (1) |
| 10. | Earthing of returned conductors offer \_\_\_\_\_\_\_\_\_ | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11 | Write short notes on altitude sensor. | (3) |
| 12 | Explain how TPS is used for sensing throttle position. | (3) |
| 13 | Draw the sectional view of a typical starter motor. | (3) |
| 14 | List the major advantages of electronic fuel injection system. | (3) |
| 15 | Write notes on electrical relay used in automobiles. | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. |  | Explain the working of a Stepper Motor with a diagram. | (15) |
| (OR) | | | |
| 17. |  | With a block diagram explain the basic Sensor Arrangement. | (15) |
| 18. |  | Explain the various components in a starting system with relevant diagram and the principle of operation of a cranking motor. | (15) |
| (OR) | | | |
| 19. |  | Explain about the starting behavior and electrical characteristics of cranking motor. | (15) |
| 20. |  | Explain about Spark Timing control of ECU. | (15) |
| (OR) | | | |
| 21. |  | Explain about Capacitance Discharge, Transistorized system, Piezo-electric and Texaco Ignition System with relevant diagram. | (15) |
| 22. |  | Describe about Headlight & Side light. Also give details of Head light dazzling and preventive methods. | (15) |
| (OR) | | | |
| 23. |  | With Diagram explain about the distributor less ignition system and its merit. | (15) |
| 24. |  | Discuss about the passenger comfort offered with advanced suspension system used electronic power steering system. | (15) |
| (OR) | | | |
| 25. |  | Discuss about the trends Vehicle control, ADAS and ADIS of Automotive sectors. | (15) |

ALL THE BEST