**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 :** | **14EC2091** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ELECTRON DEVICES AND INSTRUMENTATION** | **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. | Differentiate Intrinsic and Extrinsic Semiconductors with examples. | CO1 | 6 |
| b. | Discuss the operation of PN diode and its characteristics in detail with output wave forms. | CO1 | 14 |
| (OR) | | | | |
| 2. | a. | Explain the center tap transformer based full wave rectifier in detail. | CO1 | 12 |
| b. | Describe about Thyristor with its circuit diagram. | CO1 | 8 |
| 3. | a. | Draw the constructional diagram of LCD and explain its operation in detail. | CO1 | 10 |
|  | b. | Discuss in detail about UJT with its I-V Characteristics. | CO1 | 10 |
| (OR) | | | | |
| 4. |  | List the advantages of optocoupler and explain its operation in detail with its schematic diagram. | CO1 | 20 |
| 5. | a. | Explain in detail about MOSFET with its I-V Characteristics. | CO1 | 10 |
|  | b. | Discuss in detail about TRIAC with its I-V characteristics. | CO1 | 10 |
| (OR) | | | | |
| 6. | a. | Illustrate the importance of transducers and explain the different types of transducers in detail with examples. | CO2 | 15 |
|  | b. | Explain the operation of measurement of current using multimeter with its functional blocks. | CO2 | 5 |
| 7. | a. | Explain Linear Variable Differential Transformer with neat diagrams. | CO2 | 12 |
|  | b. | Justify the need of digital instruments with examples. | CO3 | 8 |
| (OR) | | | | |
| 8. | a. | Explain in detail about the digital Multimeter with its block diagram. | CO2 | 15 |
|  | b. | Differentiate Gunn diode and varactor diode. | CO2 | 5 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain the different types of recording systems in detail. | CO2 | 10 |
|  | b. | Draw the detailed block diagram of digital data-acquisition system and explain its operation in detail? | CO3 | 10 |

ALL THE BEST