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**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**

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

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **12EE102** | **Duration :** | **3 hrs** |
| **Sub. Name :** | **Basic Electrical and Electronics Engineering** | **Max. marks :** | **100** |

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| **Q. No.** | **Questions** | **Marks** |
| **PART-A(10X1=10 MARKS)** | | |
| 1. | When R1=5ohm, R2=5ohm are connected in parallel their equivalent resistance is\_\_\_\_\_\_\_\_\_. | (1) |
| 2. | The unit of charge is \_\_\_\_\_\_\_. | (1) |
| 3. | In A.C. circuit, the power is consumed only in \_\_\_\_\_\_\_\_. | (1) |
| 4. | Identify the peak factor value of half wave rectifier. | (1) |
| 5. | A transformer will work on | (1) |
| 6. | In a three-phase induction motor, the rotor speed is \_\_\_\_\_\_\_\_\_\_ the synchronous speed. | (1) |
| 7. | The metal from which the electrons are emitted is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | (1) |
| 8. | In a full-wave rectifier, the diodes conduct for\_\_\_\_\_\_\_\_\_\_ | (1) |
| 9. | The output of LVDT is in the form of | (1) |
| 10. | Thermocouples are \_\_\_\_\_\_\_\_ transducer. | (1) |

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| **PART B(5 X 3= 15 MARKS)** | | |
| 11. | Define potential difference. | (3) |
| 12. | Outline form factor and peak factor. | (3) |
| 13. | Mention the classification of AC machines. | (3) |
| 14. | Infer the concept of energy band. | (3) |
| 15. | List the requirements of transducer. | (3) |

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| **PART C(5 X 15= 75 MARKS)** | | | |
| 16. | a. | Define the Kirchhoff current law & illustrate the expression in a circuit. | 7 |
| b. | Comparison between Series and Parallel Circuit. | 8 |
| (OR) | | | |
| 17. | a. | Illuminatethe two resistance in parallel also current division technique. | 10 |
| b. | State Ohm’s Law | 5 |
| 18. | a. | Derive an expression of RMS value, Average value of Sinusoidally alternating quantity. | 15 |
| (OR) | | | |
| 19. | a. | Mention the advantages of three phase system. | 7 |
| b. | Sketch the star and delta connected system. | 8 |
| 20. | a. | Explain the role of commutator and brushes in DC motor. | 6 |
| b. | Describe the working and operation of a D.C. Generator. | 9 |
| (OR) | | | |
| 21. | a. | List out the classifications of transformers. | 10 |
| b. | Deduce the concept of single phase Induction motor. | 5 |
| 22. | a. | Draw the V-I characteristics of SCR. | 7 |
| b. | Write the concept of latching and holding current. | 8 |
| (OR) | | | |
| 23. | a. | Write short notes on OR Gate in addition to AND Gate. | 10 |
| b. | List out the advantages of Integrated circuits over discrete components. | 5 |
| 24. | a. | Compare the active and passive transducer. | 5 |
| b. | Explain the operation of displacement transducer with a neat sketch. | 10 |
| (OR) | | | |
| 25. | a. | Explain the principle of analog instrument. | 10 |
| b. | Write short notes on dynamometer type moving coil instrument. | 5 |

ALL THE BEST