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 :** | **12EE101** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC ELECTRICAL ENGINEERING** | **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. | State Kirchoff’s Laws & Illustrate the use of Kirchoff’s Laws in a circuit. | CO1 | 10 |
|  | b. | Derive an expression of star to delta and delta to star transformation. | CO1 | 10 |
| (OR) | | | | |
| 2. | a. | Explain about two resistance in parallel and current division technique. | CO1 | 10 |
|  | b. | List out the classification of circuit elements. | CO1 | 10 |
| 3. | a. | Compare magnetic circuit and electric circuit. | CO1 | 14 |
| b. | Define the following parameters: Magnetic Flux Density, Reluctance, Permeance | CO1 | 6 |
| (OR) | | | | |
| 4. | a. | Discuss about mutual inductance in detail. | CO1 | 10 |
|  | b. | Derive the couplingcoupling co-efficientbetween two magnetically coupled circuits. | CO1 | 10 |
| 5. | a. | With a neat sketch describe the operation of Nuclear Power Station. | CO2 | 14 |
|  | b. | Mention the hydro power generation plants implemented in India. | CO2 | 6 |
| (OR) | | | | |
| 6. | a. | How electricity is generated in Thermal Power Station, explain in detailwith neat diagram. | CO2 | 14 |
|  | b. | Briefly describe the concept of Transmission of electricity. | CO2 | 6 |
| 7. | a. | Derive the e.m.f. equation of a D.C. Generator. | CO2 | 10 |
|  | b. | Explain the operation of D.C. motor with a neat sketch. | CO2 | 10 |
| (OR) | | | | |
| 8. | a. | Discuss about Resistance – Start and Capacitor – Start Single Phase Induction Motor with neat diagrams. | CO3 | 14 |
|  | b. | List out the applications of Induction Motor. | CO3 | 6 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Draw the diagram of PMMC Instrument & explain its operation. | CO3 | 10 |
|  | b. | Analyze the two methods of providing controlling torque used in Indicating type  instruments.. | CO3 | 10 |