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



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **17EE1001** | **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. | Explain in detail about current division technique when the resistance are connected in parallel. | CO1 | 10 |
| b. | Discuss the kirchoff’s law for current and voltage parameter. | CO1 | 10 |
| **(OR)** | | | | |
| 2. |  | A circuit consists of three resistors 3Ω, 4Ω and 6Ω in parallel and fourth resistor 4Ω in series. A battery of emf 12V and internal resistance 6Ω is connected across the circuit. Fing the total current in the circuit and terminal voltage across the battery. | CO2 | 20 |
|  |  |  |  |  |
| 3. | a. | A toroidal air cored coil with 2000 turns has a mean radius of 25cm, diameter of each turn being 6cm. If the current in the coil is 10A, find MMF, flux and flux density. | CO2 | 10 |
| b. | Compare the magnetic circuit and electric circuit. | CO2 | 10 |
| **(OR)** | | | | |
| 4. | a. | Illustrate the types of transmission system with its merits and demerits. | CO4 | 15 |
| b. | Compare the OHL and UGC with suitable examples. | CO4 | 5 |
|  |  |  |  |  |
| 5. |  | Discuss the thermal power generation system with suitable layout diagram. | CO3 | 20 |
| **(OR)** | | | | |
| 6. |  | Discuss the operating principle and construction of a D.C. Machine with the neat sketch and give the justification for the same D.C. machine is used as a motor as well as a generator. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Describe the operating principle and construction of three phase induction motor with neat sketch. | CO3 | 20 |
| **(OR)** | | | | |
| 8. |  | Enumerate with a block diagram, the various systems involved in a smart energy meter. | CO5 | 20 |
|  | | **Compulsory**: |  |  |
| 9. |  | Describe the working principle and operation of 1ɸ induction motor. Also write its application. | CO3 | 20 |