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

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**End Semester Examination – Nov/Dec– 2018**

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| **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. | Derive an expression for the equivalent resistance of a number of resistors connected in series and also explain voltage division technique. | CO1 | 15 |
| b. | Mention the limitation of Ohm’s Law. | CO1 | 5 |
| (OR) | | | | |
| 2. | a. | Comparison between Series and Parallel Circuit. | CO1 | 10 |
| b. | Two resistors 12ohms and 6 ohms are connected in parallel and this combination is connected in series with a 6.25 ohms resistance and a battery as shown in the figure. Determine the emf of the battery if potential difference across 6 ohms resistance is 6 volts | CO1 | 10 |
| 3. | a. | Derive an expression of RMS value, Average value, Form factor and Peak factor of Sinusoidal Alternating quantity. | CO1 | 10 |
| b. | Compare Magnetic circuits with Electric circuits. | CO1 | 10 |
| (OR) | | | | |
| 4. | a. | With a neat sketch describe the operation of Hydro Power Generating Station. | CO2 | 10 |
| b. | List the major thermal power plants situated in India. | CO2 | 10 |
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| 5. |  | Explain the construction of A.C. Generator with neat diagrams. | CO2 | 20 |
| (OR) | | | | |
| 6. | a. | Sketch the single – line diagram of a Power System. | CO2 | 10 |
| b. | Derive the expression of relation between self and mutual inductance in detail. | CO2 | 10 |
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| 7. | a. | Describe the working of a fluorescent tube with neat diagram. | CO2 | 10 |
| b. | Explain the construction of single phase induction motor with neat diagrams. | CO3 | 10 |
| (OR) | | | | |
| 8. | a. | Draw a layout for a simple house wiring. | CO3 | 10 |
| b. | With a neat sketch explain the types of controlling torques. | CO3 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Explain about the Moving coil Instrument with a neat sketch. | CO3 | 20 |