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



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

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| **Code :** | **14EC2090** | **Duration :** | **3hrs** |
| **Sub. Name :** | **FUNDAMENTALS OF ELECTRONICS** | **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 the construction and working principle of PN diode with necessary diagrams. | CO2 | 14 |
| b. | Distinguish intrinsic from extrinsic semiconductor. | CO1 | 6 |
| **(OR)** | | | | |
| 2. | a. | Construct a common emitter configuration BJT circuit and explain the input and output characteristics. | CO2 | 16 |
| b. | Show the V-I characteristics of UJT. | CO2 | 4 |
|  |  |  |  |  |
| 3. | a. | List the ideal characteristics of op-amp and its applications. | CO2 | 10 |
| b. | Construct a transistor amplifier circuit and explain the operation. | CO2 | 10 |
| **(OR)** | | | | |
| 4. |  | Define barkhausen criteria and explain the working principle of RC phase shift oscillator in detail. | CO2 | 20 |
|  |  |  |  |  |
| 5. |  | Explain the general architecture of microprocessor and list the real time applications. | CO2 | 20 |
| **(OR)** | | | | |
| 6. | a. | Describe the telemetry circuit components and its practical applications. | CO2 | 15 |
| b. | List the types of transducers. | CO2 | 5 |
|  |  |  |  |  |
| 7. | a. | Explain the principle of communication system with a simple block diagram. | CO3 | 14 |
| b. | Interpret the need for modulation. | CO3 | 6 |
| **(OR)** | | | | |
| 8. |  | Outline the basic demodulator and modulator circuits used in communication systems. | CO3 | 20 |
|  | | **Compulsory**: |  |  |
| 9. |  | Summarize the concept of optical fiber communication system in detail. | CO3 | 20 |