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



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

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| **Code :** | **17EC1001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **BASIC ELECTRONICS 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. |  | Elaborate active and passive components. Discuss in detail the color coding of the resistors. | CO1 | 20 |
| **(OR)** | | | | |
| 2. | a. | Enumerate the various types of semiconductors with necessary diagrams. | CO2 | 15 |
| b. | Appraise on covalent bond. | CO2 | 5 |
|  | | | | |
| 3. |  | Provide a detailed description on PN Junction diode with its characterisitics. Mention its application with necessary diagram. | CO3 | 20 |
| **(OR)** | | | | |
| 4. |  | Comprehend on BJT. Discuss the input and output characteristic of an NPN transistor in Common base configuration. | CO3 | 20 |
|  | | | | |
| 5. | a. | Elucidate on 4x1 multiplexer with necessary diagrams. | CO4 | 10 |
| b. | State your perception about universal logic gates with necessary diagrams and proof. | CO4 | 10 |
| **(OR)** | | | | |
| 6. | a. | Simplify the following using Karnaugh map.  F(A,B,C,D) = ∑(1,3,4,5,6,7,9,11,13,15) | CO4 | 10 |
| b. | Discuss in detail the Half adder with relevant diagrams. | CO4 | 10 |
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| 7. | a. | Briefly describe the block diagram of communication system. | CO5 | 15 |
| b. | State the need for modulation. | CO5 | 5 |
| **(OR)** | | | | |
| 8. | a. | Express in detail the 2G, 3G, 4G and 5G wireless communication. | CO5 | 15 |
| b. | Provide short notes on Modulation. | CO5 | 5 |
|  | | **Compulsory:** |  |  |
| 9. | a. | Elaborately discuss the elements of embedded system and its applications in smart health care. | CO6 | 10 |
| b. | Elaborately discuss the uplink and downlink block of Satellite communication with relevant diagrams. | CO5 | 10 |