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



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

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| **Code :** | **16EC1001** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ELECTRONICS FOR EVERYDAY LIFE** | **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. | Describe the working principle and V-I characteristics of zener diode with neat diagram and mention the applications. | CO1 | 15 |
| b. | Write briefly the application and types of special diodes. | CO1 | 5 |
| **(OR)** | | | | |
| 2. | a. | State the color coding process of resistor with suitable examples. Also find the resistance value for the colour band sequence, Yellow-Blue-Red-Gold. | CO1 | 10 |
| b. | Discuss in detail the electrostatic capacitors, ceramic and plastic capacitors. | CO1 | 10 |
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| 3. | a. | Describe the biasing and characteristics of PN junction diode with neat diagram and mention the applications. | CO1 | 10 |
| b. | Derive the relationship between α and β of a transistor. | CO1 | 10 |
| **(OR)** | | | | |
| 4. |  | Appraise on the V-I characteristics of transistor in common base (CB) configuration with a clear explanation and relevant diagram. | CO1 | 20 |
|  |  |  |  |  |
| 5. | a. | Find the Base current, IB in a common base transistor circuit where the emitter current, IE is 10 mA and the collector current IC is 8.8 mA. | CO1 | 5 |
| b. | Obtain the logic expression and truth table for the given logic circuit . | CO2 | 5 |
| c. | Draw the basic block of combinational and sequential circuit and list out the differences. | CO2 | 5 |
| d. | Convert the decimal number (67.2135)10 to binary, octal and hexadecimal. | CO2 | 5 |
| **(OR)** | | | | |
| 6. | a. | Elucidate the operation of various logic gates with its symbol and truth table. | CO2 | 15 |
| b. | Represent NAND equivalent logic diagram of AND gate and NOT gate with brief explanation. | CO2 | 5 |
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| 7. | a. | Design a 4x1 multiplexer and draw the logic circuit using logic gates. | CO2 | 10 |
| b. | State Demorgan’s law. | CO2 | 4 |
| c. | Discuss briefly the application and types of memory devices. | CO2 | 6 |
| **(OR)** | | | | |
| 8. | a. | Compare and contrast 4G with 5G mobile technology. | CO3 | 6 |
| b. | Define IoT. Justify how IoT is executed in digital India. | CO3 | 8 |
| c. | Discuss briefly the applications of Wi-Fi and Bluetooth. | CO3 | 6 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Realize the role of IOT in smart transport and health care. Explain with necessary block diagram. | CO3 | 10 |
| b. | Draw the basic block diagram of communication system and explain  each block. | CO3 | 10 |