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

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

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| **Code :** | **14EC1001** | **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. |  | Describe the biasing and characteristics of PN junction diode with neat diagram. | CO1 | 20 |
| (OR) | | | | |
| 2. | a. | Discuss the formation of N type and P type semiconductor with its covalent bond structure. | CO1 | 15 |
| b. | Mention few applications of PN Junction diode. | CO1 | 5 |
|  |  |  |  |  |
| 3. |  | Comprehend on JFET. Discuss the characteristics of JFET in detail. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Elucidate the operation and characteristics of UJT with neat diagram. | CO1 | 20 |
|  |  |  |  |  |
| 5. | a. | Comprehend in detail on the various logic gates. | CO1 | 12 |
| b. | Design a 1x4 demultiplexer. | CO1 | 8 |
| (OR) | | | | |
| 6. | a. | Design a 4x1 Multiplexer and draw its logic circuit. | CO1 | 14 |
| b. | Convert (248)10 to its equivalent binary, octal and hexadecimal. | CO1 | 6 |
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| 7. | a. | Discuss in detail about Amplitude Modulation. Also derive the expression for the Amplitude Modulated wave. | CO2 | 12 |
| b. | Explain the operation of superheterodyne receiver. | CO2 | 8 |
| (OR) | | | | |
| 8. | a. | Discuss in detail about Frequency Modulation. Also derive the expression for the Frequency Modulated wave. | CO2 | 12 |
| b. | Draw the basic block diagram of communication system and explain each block. | CO2 | 8 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Discuss briefly about the various blocks of satellite communication. | CO2 | 10 |
| b. | Discuss briefly about the various blocks of optical fiber communication. | CO2 | 10 |