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



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

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| **Code :** | **16CA2003** | **Duration :** | **3hrs** |
| **Sub. Name :** | **COMPUTER ORGANIZATION AND ARCHITECTURE** | **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 different parts of a Computer Instruction through suitable diagram. | CO1 | 10 |
| b. | List and explain the different addressing modes. | CO1 | 10 |
| **(OR)** | | | | |
| 2. |  | The registers in the Basic Computer are connected using a bus – Justify this statement with necessary diagrams. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | Discuss the working of memory reference instructions with symbolic description. | CO3 | 10 |
| b. | List the different types of Instructions and the symbols associated with it. | CO1 | 10 |
| **(OR)** | | | | |
| 4. | a. | Explain the control unit of a basic computer with relevant diagrams. | CO1 | 10 |
| b. | Distinguish between hardwired control and micro-programmed control. | CO1 | 10 |
|  |  |  |  |  |
| 5. |  | Discuss the register organization with necessary diagrams. | CO1 | 20 |
| **(OR)** | | | | |
| 6. | a. | Solve the arithmetic expression using reverse polish notation:  (4 × 6) + (5 × 7). | CO2 | 10 |
| b. | A control word of 14 bits is needed to specify a microoperations in the CPU. Justify this statement with proper example. | CO2 | 10 |
|  |  |  |  |  |
| 7. | a. | Discuss how addition and subtraction is performed with signed-magnitude Data. | CO2 | 10 |
| b. | Explain the working of input-output interface. | CO3 | 10 |
| **(OR)** | | | | |
| 8. | a. | Explain the process involved in multiplication of two fixed-point binary number in signed-magnitude representation. | CO2 | 10 |
| b. | Discuss the peripheral devices of a basic computer. | CO3 | 10 |
|  | | **Compulsory**: |  |  |
| 9. |  | Bring out the advantages and disadvantages of different types of memory. | CO3 | 20 |