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



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

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| **Code :** | **17CA2003** | **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. | A processor has many registers to hold instructions, address, data, etc., - Justify the work of different basic computer registers. | CO1 | 20 |
| **(OR)** | | | | |
| 2. | a. | Discuss the different phases of Instruction cycle in a basic Computer. | CO1 | 20 |
|  |  |  |  |  |
| 3. | a. | A control word of 14 bits is needed to specify a micro-operations in the CPU. Justify this statement with proper example. | CO4 | 10 |
|  | b. | Write the stack operation to evaluate the expression (11 x 9) + (12 x 10). | CO3 | 10 |
| **(OR)** | | | | |
| 4. | a. | Evaluate the following arithmetic statement X = (A + B) \* (C + D) using Zero, One, Two and Three address instructions. | CO3 | 20 |
|  |  |  |  |  |
| 5. | a. | Discuss in detail the Booth algorithm for multiplication through suitable examples. | CO2 | 20 |
| **(OR)** | | | | |
| 6. | a. | Discuss how addition and subtraction is performed with signed-magnitude Data. | CO2 | 20 |
|  |  |  |  |  |
| 7. | a. | Write a detailed note on the peripheral devices of a basic computer. | CO6 | 20 |
| **(OR)** | | | | |
| 8. | a. | Justify the need for Direct Memory Access through suitable diagrams. | CO6 | 20 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Write short notes on |  |  |
|  |  | 1. Cache Memory. | CO5 | 10 |
|  |  | 1. Associative Memory. | CO5 | 10 |