**VISHWAKARMA INSTITUTE OF TECHNOLOGY**

**Department of Engineering, Sciences and Humanities**

**FY – 2022-2023 -SEM II**

**ES1045: Computer Organization and Architecture**

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**HOME ASSIGNMENT NO. 3**

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| **Q. No.** | **CO No.** | **BT\* No.** | **Question** | **Max marks** |
| **1** | **CO1** | **3** | **Perform binary Addition using paper and pencil method**   1. **111101 + 11001** 2. **1111 + 1111** 3. **10001 + 101010** 4. **11010 + 11110** 5. **101011 + 10100** | **10** |
| **2** | **CO1** | **3** | **Perform binary subtraction using paper and pencil method**   1. **10111 - 111** 2. **11011 - 101** 3. **110 - 111** 4. **1111 - 1101** | **10** |
| **3** | **CO1** | **3** | **Perform binary Multiplication using paper and pencil method**   1. **10 x 10 =** 2. **1100 x 11 =** 3. **101 x 101=** 4. **1011 x 110 =** 5. **11011 x 101 =** | **10** |
| **4** | **CO1** | **3** | **Perform binary Division using paper and pencil method**   1. **101010 / 101=** 2. **1111/ 11 =** 3. **1010 / 101 =** 4. **1101 / 11 =** 5. **10111 / 110 =** | **10** |
| **5** | **CO1** | **3** | **Find 2s complement of a following numbers number -14, -29, -33, -83 using paper and pencil method** | **5** |
| **6** | **CO1** | **3** | **Find multiplication using Booth’s algorithm**   1. **-8 \* 4** 2. **13 \* 11** 3. **-7 \* 3** 4. **3 \* -5** 5. **6 \* 2** | **25** |
| **7** | **CO1** | **3** | 1. **Find 43 divided by 7 using division restoring algorithm** 2. **Find 11 divided by 3 using division restoring algorithm** 3. **Find 23 divided by 4 using division restoring algorithm** 4. **Find 36 divided by 5 using division restoring algorithm** 5. **Find 19 divided by 2 using division restoring algorithm** | **25** |
| **3** | **CO2** | **4** | **Differentiate between RISC and CISC processors** | **5** |

**Important Note**: Submit the Assignment **on or before 29thth April 2023.**