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| **P.V.P Siddhartha Institute of Technology** |
| **Department of Computer Science and Engineering** |
| **Course: B.Tech.** | **Year: II** | **Semester: I** | **A.Y:2023 – 24** | **Date:21-09-23** |
| **Subject Code: 20CS3303** | **Subject Name: Computer Organization & Architecture** | **Regulation:PVP20** |
| **QUESTION BANK FOR HOME ASSIGNMENT-1** |
| **Q.No** | **QUESTION** | **CO** | **Level** |
| **1** | Design a 4-bit arithmetic circuit using four full adders.  | CO2 | L3 |
| **2** | The adder- Subtractor circuit of fig has the following values for input mode M and data inputs A and B. In each case, determine the values of the outputs S3, S2, S1,S0 and C4.

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| --- | --- | --- | --- |
|  | M | A | B |
| a |  0 | 0111 | 0110 |
| b | 0 | 1000 | 1001 |
| c | 1 | 1100 | 1000 |
| d | 1 | 0101 | 1010 |
| e | 1 | 0000 | 0001 |

 | CO2 | L3 |
| **3** | Construct and explain the basic Control Unit? | CO2 | L3 |
| **4** | a) Explain the three different types of instruction formats used in basic computer | CO2 | L2 |
| b) Sketch and explain flowchart for interrupt cycle | CO2 | L3 |
| **5** | Convert the following expressions into reverse polish notationa. X+Y+Z b. X\*(Y+Z) c. A+B/C\*(D+E\*F) | CO3 | L3 |