**COMPUTER ORGANIZATION & ARCHITECTURE (LABFINAL ): 20 MARKS, TIME: 1 HOUR**

**Problem 1.** Write an assembly program that takes character input from user and

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| I) prints its ASCII code in binary at the next line (10)  II) and the number of 1 bit that exists in the binary sequence. (10)  **Algorithm:**   1. Take character input into BL 2. Initialize counter CX for looping to print binary sequence 3. Initialize register BH to zero (this will count total 1s) 4. Start loop    1. Use left-shift on BL    2. If there is carry (1), print 1 and increment BH    3. If there is no carry(o), print 0 5. Convert ascii character stored in BH into digit (hint: add 30) and print it. |  |