



# University of Central Punjab

(Incorporated by Ordinance No. XXIV of 2002 promulgated by Government of the Punjab)

## Faculty of Information Technology & Computer Science

Mid-term Exam, F22

NAME \_\_\_\_\_ REG# \_\_\_\_\_

Computer Organization and Assembly Language

BS(CS), PADP(CS)

Time allowed: Entire exam slot

**V2**

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### Instructions

- All questions are mandatory.
- The lab exam is available in two versions on the portal. You need to solve your version of the exam as per the instructions of the proctor or invigilator.

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### Question#1 (20 points)

Write a program that declares and initializes a word-type array of 10 elements. The program then searches the array for a number stored in the variable num. If the number is found in the array, it stores 1 in the DX register. Otherwise, it stores 0.

### Question#2 (20 points)

Write a program that stores the given 64-bit number into memory using a byte array. The program then counts the number of ones in each byte and stores the count in the corresponding element of another array.

Num1: 0x54CD45EF67AB0077