|  |  |
| --- | --- |
|  | **Computer Organization & Assembly Language**  **BSCS 3rd**  **Department of Computer Science**  **Bahria University, Lahore Campus** |

**Quiz: 3**

Date: Week 12, 24th May 2023

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Roll No: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |
| --- | --- | --- | --- |
| **Evaluation of CLO** | **Question Number** | **Marks** | **Obtained Marks** |
| **CLO1: CLO statement**  *Simulate the internal representation of data, and show how data is stored and accessed in, I/O modules, and the interconnecting components of the computer systems* | 1 | 2.5 |  |
|  |  |  |
| **Total Marks** | | **2.5** |  |

**Question 1.**

1. Can multiplication of two variables (not constants) be implemented using the bit shift operations. Would you consider using the bit shift operations implementation of multiplication and divide for two variables, or would you always use the mul or div operators in MIPS assembly? Defend your choice.
2. Implement a program to prompt the user for two numbers, the first being any number and the second a prime number. Return to the user a 0 if the second number is a prime factor for the first, or any number if it is not. For example, if the user enter 60 and 5, the program returns 0. If the user enters 62 and 5, the program returns 2.