

**COMSATS University Islamabad, Lahore** **Campus**

**Assignment 1– FALL 2020**

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| Course Title: | Microprocessor and Assembly Language | | | | Course Code: | | CSC321 | Credit Hours: | 3(2,1) |
| Course Instructor/s: | Sheeza Zaheer | | | | Programme Name: | | BCS | | |
| Semester: | 4 | Batch: | SP19 | Section: | A, B, C | | Date: | 9/29/20 | |
| **Deadline:** | **10/6/2020** | | | | **Maximum Marks:** | | | **25** | |
| Student’s Name: |  | | | | Reg. No. |  | | | |
| **Important Instructions / Guidelines:**   * Be precise and to the point while answering any question. * Show all immediate steps. Every step carry individual mark. * **Cheating will result in negative marking and even worse. Stay honest.** | | | | | | | | | |

**Question no 1:** Perform the following additions: **[Marks: 1.5 + 1.5 = 3]**

1. 100111101b + 10001111001b
2. FEFFEh + FBCADh

**Question no 2:** Perform the following subtractions: **[Marks: 1.5 + 1.5 = 3]**

1. 10000101b – 111011b
2. F001Eh – 1FF3Fh

**Question no 3:** Do the following binary and hex subtractions by two’s complement addition.

**[Marks: 5]**

1. 2988h – C4A2h

**Question no 4:** Give the unsigned and signed decimal interpretations of each of the following numbers. **[Marks: 3 + 3 = 6]**

1. FA12h
2. 2AB4h

**Question no 5:** Show how the decimal integer -149 would be represented

**[Marks: 3 + 3 = 6]**

1. In 16 bits.
2. In 8 bits.

**Question no 6:** Translate the following secret message, which has been encoded in ASCII as:

**41 4C 4C 41 48 20 49 53 20 47 52 45 41 54 [Marks: 2]**