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**Al-Isra University**

**Faculty of IT**

**Department of Computer Science**

**جــامـعـة الإسراء**

**كـليـة تكـنولوجيـا المعلومـات**

**قـســم هندسة البرمجيات**

|  |  |  |
| --- | --- | --- |
| **Department:**  SE | **Assignment:**  **#3** | **Submission Deadline:** |
| **Semester:**  Second | **Year**:  2023/2023 | **Instructor**  Dr. Dimah Fraihat |
| **Course No.:** | **Course Name:**  Computer Design and Organisation | **Section:**  1 |
| **Student No.:**  **AD0039** | **Student Name:**  **فراس سمير سليم** | **Submission date:**  24/05/2024 |

|  |  |  |
| --- | --- | --- |
| Question No. | Mark | |
| Max | Score |
| 1 | **1** |  |
| 2 | **1** |  |
| 3 | **1** |  |
| 4 | **1** |  |
| 5 | **1** |  |
| **Total Mark** | **5** |  |

**Note: 1- Copy and paste are prohibited**

**Assignment Title**: Arithmetic

Q1) find the result of

1. 1101 ÷ 11 =

* 1101 = 13 dec
* 11 = 3 dec
* 13 ÷ 3 = 4.3
* 4.3 ≈ **100.001**

1. 1110 \* 1011 =

* 1110 = 14 dec
* 1011 = 11 dec
* 14 \* 11 = 154
* 154 = **10011010**

1. 1001- 1101 =

* 1001 = 9 dec
* 1101= 13 dec
* 13 – 9 = -4
* -4 = **-100**

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1. 0101+1101 =

* 0101 = 5 dec
* 1101 = 13 dec
* 13 + 5 = 18
* 18 = **10010**

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Q2) a) Illustrate the main ways that are used to represent negative numbers in the computer. Specify briefly the advantages and disadvantages of each representation form.