**DLD Lab Manual 1**

**Purpose of this Lab:**

* Understanding the number system and their conversions
* Arithmetic Operations

***Note:***

* ***Attempt all the questions by using pen & paper. Take “clear” pictures and upload them in G-classroom.***
* ***Show the working and all steps to obtain full marks.***

Q1- Convert the following number in base 8 and 16.

1. (1234)5
2. (187419)10
3. (122)10

Q2- Add the following binary numbers.

1. 11+11
2. 110+100
3. 1010100+1000011

Q3- Perform the following binary subtraction.

1. 11-01
2. 111 - 100
3. 1010100-1000011

Q4- Perform the following binary multiplication.

1. 11×11
2. 101×111

Q5- Convert the following binary numbers to hexadecimal.

1. 1100101001010111
2. 11001010101001

Q6- Determine the binary number for the following hexadecimal number.

1. (10A)16

Q7- Convert the following hexadecimal number to decimal.

1. (E5)16

Q8- Subtract the following hexadecimal numbers.

1. (84)16-(2A)16
2. (C3)16-(B)16

Q9- Add the following hexadecimal numbers.

1. (4A)16+(3F)16
2. (BF)16+(AC)16

Q10- Multiply the following hexadecimal numbers.

1. (1F)16 \* (C)16
2. (2B)16 \* (5A)16

Q11- Subtract the following octal numbers.

* 1. - (162)8

Q12- Add the following octal numbers.

1. (162)8 + (537)8
2. (136)8 + (636)8

Q13- Multiply the following octal numbers.

1. (6)8\* (23)8
2. (15)8\* (44)8