**Lab 13 Number/Data Representation**

**Note: Show your work for each question (3/4 of the mark is for showing the work) and remove extra space between questions.**

1. What is 23010 in binary? (points 2)

2. Convert 8710 to binary using both methods: sum of powers of 2 method and repeated division by 2nd method. (points 4)

3. Convert these numbers from binary to decimal: (points 3)

10110

1011

11101

4. Add following binary numbers: (points 3)

11011 + 1001 =

1010+ 1011 =

10101 + 10111 =

6. Using 2’s complement method, subtract 39 from 84 using binary notation. (points 3)

7. Multiply (1110) and (101) (points 2)

8. Convert the following binary number to Hexadecimal number: (points 2)

1101101011100110 =

9. Convert the following hexadecimal number to binary number: (points 2)

A6E9H =