Assignment #1

Introduction to Computing (B)

Deadline: 14th February, 2018 (In Class)

Instructions:

- ✓ Use proper assignment papers for solving your assignment questions. Assignment done on diary pages, register pages, rough pages will not be credited.
- ✓ Do not copy the work of your peers. In case cheating is detected, then your case will be referred to DC.

Question #1:

Show working clearly and fill table.

Base10	Base2	Base8	Base 16
1234	**?**	**?**	**?**
?	**11111000011011**	**?**	**?**
?	**?**	**77663**	**?**
?	**?**	**?**	**99FFE**
?	**?**	**?**	**7799**
7788	**?**	**?**	**?**

Question #2:

You have a secret number system in base 6. The 6 symbols used to represent the numbers 0, 1, 2, 3, 4, 5 are *, @, $, %,?,< respectively.

a. What is the decimal representation of these numbers: @@, %?$, *$@, % $*@<?

b. What is the representation of (6F)16 in the new system

Question #3:

Question# a: Write pseudo code that reads two numbers and multiplies them together and print out their product.

Question # b: Write pseudo code that tells a user that the number they entered is not a 5 or a 6. **Question #c**: Write pseudo code that performs the following: Ask a user to enter a number. If the number is between 0 and 10, write the word blue. If the number is between 10 and 20, write the word red. if the number is between 20

and 30, write the word green. If it is any other number, write that it is not a correct color option.

Question #d: Write pseudo code to print all multiples of 5 between 1 and 100 (including both 1 and 100).

Question #e: Write pseudo code that will count all the even numbers up to a user defined stopping point.

Question #f: Write pseudo code that will perform the following. a) Read in 5 separate numbers. b) Calculate the average of the five numbers. c) Find the smallest (minimum) and largest (maximum) of the five entered numbers. d) Write out the results found from steps b and c with a message describing what they are.

Question #g: Write pseudo code that reads in three numbers and writes them all in sorted order. **Question #h**: Write pseudo code that will calculate a running sum. A user will enter numbers that will be added to the sum and when a negative number is encountered, stop adding numbers and write out the final result.

Question #4:

Convert in binary using 2's complement:

Decimal(signed)	**4-bit Binary**
-12	**?**
-1	**?**
-4	**?**
-5	**?**
-6	**?**
-7	**?**
-8	**?**
8	**?**
7	**?**
5	**?**