**CSE260**

**Assignment 01 (For sections 6,11,12,15)**

**This assignment must be hand-written. Show ALL steps and calculations in ALL questions.**

1. Convert the following binary numbers to equivalent decimal numbers.

(a) (101110010001)2

(b) (11011.101)2

2. Convert the following decimal number to equivalent binary numbers. (4195)10

3. Convert the following octal numbers to equivalent decimal numbers.

a) (45)8

b) (2173)8

4. Convert the following decimal number to equivalent hexadecimal numbers. (513)10

5. Convert the following binary number to equivalent hexadecimal numbers. (101101110)2

6. Perform the following base conversions

a) (29)12 = (?)7

b) (10110111)5 = (?)4

c) (1F9E)17 = (?)18

7. Perform addition and multiplication for the pair of following numbers. Assume that the numbers are in **i) base-11 and ii) base-9**.Verify your results by converting the problem into decimal.

418

734

8. You are a computer engineer and you want to buy two 8 GB DDR4 RAMs. Each RAM costs (1G2)17 dollars. You also want to buy a graphics card RTX which cost (10010110010)2 dollars. However, you don’t have that much money with you and you are afraid to ask about it. Suddenly, one of your generous friends agreed to give you the money you need. He decided to give you (4065)8 dollars. How much dollars will you have left after buying those components? (Show the answer in decimal)