**Class Assignment:**

**Note:** Find the solution for the following questions and submit the solution till Sunday.

**Question:** List the octal and hexadecimal numbers from 16 to 32. Using A and B for the last two digits, list the numbers from 8 to 28 in base 12.

**Question:** What is the largest binary number that can be expressed with 16 bits? What are the equivalent decimal and hexadecimal numbers??

**Question:** Add and multiply the following numbers without converting them to decimal.

* Base-4 numbers 203 and 302

**Question:** Find the 16’s complement of C3DF.

**Question:** Perform subtraction on the given unsigned binary numbers using the 2’s complement of the subtrahend. Where the result should be negative, find its 2’s complement and affix a minus sign.

* 1001 - 110101

**Question:** The state of a 12‐bit register is 100010010111. What is its content if it represents

* Three decimal digits in BCD?
* Three decimal digits in the excess‐3 code?

**Question:** Simplify the following Boolean expressions to a minimum number of literals:

* (a + b + c′)(a′ b′ + c)
* a′bc + abc′ + abc + a′bc′
* ABC'D + A'BD + ABCD to two literals