

# CSE260 Assignment 3 Spring 2022

## Question 1:

Simplify the function using tabulation method and find the correct answer in SOP form:

$$F(A,B,C,D) = \sum(0,2,7,11,12,14) + d(3,4,5,6)$$

## Question 2:

Simplify the function using tabulation method and find the correct answer in SOP form:

$$F(A,B,C,D) = \sum(0,1,2,7,8,10,11,13, 15)$$

## Question 3:

Design a circuit diagram for the following comparator system that takes three 3-bit binary numbers [A and B] as inputs and outputs in the following fashion:

Output=1; if  $A < B$

Output=0; otherwise

NB: For the comparator part, you should only use different gates to build the circuit. You cannot use a COMPARATOR IC for building that part. For other parts, you may use corresponding ICs.

## Question 4:

Design a 16 people voter system using necessary parallel and full adder(s).

## Question 5:

Design a BCD to excess 5 system using necessary parallel adder(s).