Assignment #8

ECE 487 (Data Communications Networks) **Section B1**   Dr. Hai Jiang

Electrical and Computer Engineering, University of Alberta   Winter 2020

Your Last Name: _____   Your Fist Name: _____

Your Student ID: _____

Due: Thursday, March 19, 2020, 4:00 PM, in the assignment box at 2nd Floor - Pedway between ICE and ETLC

1. Change the following IP addresses from binary notation to dotted-decimal notation. (4 points)
a) 01110110 11101110 01100111 01111011
b) 10101110 11000010 11111000 00011101
c) 11011111 11110000 00001110 01011101
d) 11110111 11101111 11000111 00011100

2. In a block of addresses with mask "/15", we know the IP address of one host is 24.32.12.56. What are the first address and the last address in this block? **Please show the addresses using dotted-decimal notation**. (4 points)

3. (12 points) An organization is granted the address block 16.0.0.0/8. The administrator wants to create 1024 equal-size subnets. Assume no address is left unused after the 1024 subnets are created.
a) Find the subnet mask. (2 points)
b) Find the number of addresses in each subnet. (2 points)
c) Find the first and last addresses (using dotted-decimal notation) in the first subnet. (4 points)
d) Find the first and last addresses (using dotted-decimal notation) in the last subnet. (4 points)