Bahria University
Lahore Campus
Department of Computer Sciences

DATA COMMUNICATIONS & NETOWRKING
ASSIGNMENT # 03

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Program: BSCS
Semester: 4th

1. Change the following IP addresses from dotted-decimal notation to binary notation.
a. 114.34.2.8
b. 129.14.6.8
c. 208.34.54.12
d. 238.34.2.1

2. In a block of addresses, we know the IP address of one host is 25.34.12.56/16. What are the first address (network address) and the last address (limited broadcast address) in this block?

3. An organization is granted the block 16.0.0.0/8. The administrator wants to create 500 fixed-length subnets.
a. Find the subnet mask.
b. Find the number of addresses in each subnet.
c. Find the first and last addresses in subnet 1.
d. Find the first and last addresses in subnet 500.

An ISP is granted a block of addresses starting with 150.80.0.0/16. The ISP wants to distribute these blocks to 2600 customers as follows.
a. The first group has 200 medium-size businesses; each needs 128 addresses.
b. The second group has 400 small businesses; each needs 16 addresses.
c. The third group has 2000 households; each needs 4 addresses.
Design the sub-blocks and give the slash notation for each sub-block. Find out how many addresses are still available after these allocations.