

National University of Computer and Emerging Sciences, Lahore
Campus Quiz4 [BCS: Section 5A] Fall 2024

Computer Networks (Code: CS3001)

Quiz Date: October 31, 2024

Total Marks: 10

Duration: 20 -Minutes

Name ----- Roll #-----

Instructions: Attempt all questions on this sheet. You can make use of rough sheet (do not attach to this sheet). Cutting/Overwriting will be considered incorrect.

Q1: For each of the following IP address ranges, specify the network address, broadcast address, and maximum number of host IPs available and fill the table. (6 Marks)

| CIDR | Network Address | Broadcast Address | Maximum Hosts |
|------------------|-----------------|-------------------|---------------|
| 192.168.100.0/24 | 192.168.100.0 | 192.168.100.255 | 254 |
| 100.10.8.0/22 | 100.10.8.0 | 100.10.11.255 | 1022 |
| 202.1.0.0/16 | 202.1.0.0 | 202.1.255.255 | 65534 |
| 101.51.192.0/18 | 101.51.192.0 | 101.51.255.255 | 16382 |

Q2:An organization is granted a block of addresses starting with 132.100.24.0/23 (512 addresses). The organization needs to have four sub-blocks of addresses to use in its four subnets. Sub-blocks are designed in such a way that 1st one can accommodate 256 addresses, 2nd can accommodate 128 addresses and remaining two sub-blocks can accommodate 64 addresses each (including network address and broadcast address). With reference to this scenario, answer the following: (4 Marks)

| | |
|---|--|
| Write the subnet mask for each sub-block. Subnet mask for the 1st sub-block: 255.255.255.0 Subnet mask for the 2nd sub-block: 255.255.255.128 Subnet mask for the 3rd sub-block: 255.255.255.192 Subnet mask for the 4th sub-block: 255.255.255.224 | Write the 25th and 50th host address for 1st and 3rd sub-blocks. 25th host address for 1st sub-block: 132.100.24.25/24 50th host address for 1st sub-block: 132.100.24.50/24 25th host address for 3rd sub-block: 132.100.25.153/26 50th host address for 3rd sub-block: 132.100.25.178/26 |
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