

Course Code: CSE 3201 Quiz 04

Student ID: _____

Time: 20 Minutes

Questions

1. An organization is granted a block of addresses with the beginning address 14.24.74.0/24. The organization needs to have 11 subnets: two subnets, each with 64 addresses; two subnets, each with 32 addresses; three subnets, each with 16 addresses; four subnets, each with 4 addresses. How many addresses are there in the block? Design the subnets. 2 $\frac{1}{2}$
2. Explain why backward compatibility is an important factor for IEEE standards? 1 $\frac{2}{3}$
3. An organization is granted the network address block of 130.34.12.64/26. The organization needs to have four subnets. What are the subnet addresses and their range for each subnet? 2 $\frac{1}{2}$

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1. An ISP is granted a block of addresses starting with 190.100.0.0/16. The ISP needs to distribute these addresses to three groups of customers as follows: The first group has 64 customers and each needs 256 addresses; The second group has 128 customers and each needs 128 addresses; The third group has 128 customers and each needs 64 addresses. Design the sub-blocks and find out how many addresses are still available after these allocations. 2 $\frac{1}{2}$
2. Explain the statement "*WiFi products are only capable of tapping into the standard under which they operate.*" 1 $\frac{2}{3}$
3. An organization is granted the block 198.27.60.0/24. The administrator wants to create 16 subnets. Find the subnet mask; the number of addresses in each subnet; the 1st and last addresses in subnet 1; Find the 1st address in subnet 16. 2 $\frac{1}{2}$

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1. 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: The first group has 200 businesses and each needs 128 addresses; The second group has 400 businesses and each needs 16 addresses; The third group has 2000 households; each needs 4 addresses. Design the sub-blocks and find out how many addresses are still available after these allocations. $2\frac{1}{2}$
2. Compare and contrast the IEEE 802.11ad and IEEE 802.11ah protocols. $1\frac{2}{3}$
3. An organization is granted the block 211.17.180.0/24. The administrator wants to create 32 subnets. Find the subnet mask; the number of addresses in each subnet; the first and last addresses in subnet 1; the last addresses in subnet 32. $2\frac{1}{2}$