**Computer Network || Summer- 25**

**Quiz 1** **Section: 65_J**

**ID:**_____ **Name:**_____ **Set: A**

A company has been assigned the network 172.20.0.0/16 and plans to expand its operations across 8 branch offices. Each branch office requires the same number of IP addresses. Using Fixed-Length Subnet Masking (FLSM), complete the following table and answer the questions: **7.5 Marks**

| Branch Office | Network Address | Broadcast Address |
|---|---|---|
| Branch Office 1 | | |
| Branch Office 2 | | |
| Branch Office 3 | | |
| Branch Office 4 | | |
| Branch Office 5 | | |
| Branch Office 6 | | |
| Branch Office 7 | | |
| Branch Office 8 | | |

1. Given an IP address of 192.168.1.0/24, how many hosts can be assigned in this network?
   **Answer:**

2. What is the broadcast address for the network 192.168.10.0/24?
   **Answer:**

3. Given an IP address of 192.168.1.0/24, what would be the result of changing the subnet mask to /26, and how many subnets and hosts will this create?
   **Answer:**

4. How would you calculate the number of subnets and hosts if you are given a subnet mask of /27 for a Class C network?
   **Answer:**

5. What is the broadcast address for the network 10.1.2.32/27?
   **Answer:**

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**Quiz 1** **Section: 65_J**

**ID:**_____ **Name:**_____ **Set: B**

You are assigned the network 172.20.0.0/16 and need to divide it into 16 equal-sized subnets using Fixed Length Subnet Masking (FLSM). Fill in the following details for each subnet. **7.5 Marks**

| | Network Address | Broadcast Address | Last Usable IP |
|---|---|---|---|
| Subnet 1 | | | |
| Subnet 2 | | | |
| Subnet 3 | | | |
| Subnet 4 | | | |
| Subnet 5 | | | |
| Subnet 6 | | | |
| Subnet 7 | | | |
| Subnet 8 | | | |

1. Given an IP address of 192.168.1.0/25, how many hosts can be assigned in this network?
   **Answer:**

2. What is the broadcast address for the network 10.0.0.0/8?
   **Answer:**

3. Given an IP address of 192.168.1.0/24, what would be the result of changing the subnet mask to /27, and how many subnets and hosts will this create?
   **Answer:**

4. Calculate the number of subnets and hosts if you are given a subnet mask of /28 for a Class C network?
   **Answer:**

5. What is the broadcast address for the network 192.168.50.64/26
   **Answer:**