**Section A : Subnetting**

1. You are asked to set up a network for your company and one of the network IP address given to you by the system administrator is **194.167.177.1/28**.Based on the scenario, answer the following questions.

1. Which IP class does the given network IP address belong to?

2. What is the default subnet mask for the given network IP address? 3. How many subnets are possible?

4. What is the total number of hosts per subnet?

5. How many usable hosts per subnet?

6. What is the new subnet mask?

7. What is the total number of net bits borrowed for creating subnet?

8. What is the total number of host bits needed for identifying total number of hosts per

subnet?

9. Fill in the table below by listing subnet numbers, the first, last usable host address, and

the broadcast address. Repeat until all addresses (Network Address, 1st Usable Host, Last Usable host and Broadcast Address) are listed for each subnet.

Note: You may not need to use all rows

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| **Subnet Number** | **Network Address** | **1st Usable Host** | **Last Usable host** | **Broadcast Address** |
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2. You are asked to set up a network for your company and one of the network IP address given to you by the system administrator is **194.167.177.1/27**.Based on the scenario, answer the following questions.

1. Which IP class does the given network IP address belong to?

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9. Fill in the table below by listing subnet numbers, the first, last usable host address, and

the broadcast address. Repeat until all addresses (Network Address, 1st Usable Host, Last Usable host and Broadcast Address) are listed for each subnet.

Note: You may not need to use all rows

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| **Subnet Number** | **Network Address** | **1st Usable Host** | **Last Usable host** | **Broadcast Address** |
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3. You are asked to set up a network for your company and one of the network IP address given to you by the system administrator is **194.167.177.1/26**.Based on the scenario, answer the following questions.

1. Which IP class does the given network IP address belong to?

2. What is the default subnet mask for the given network IP address? 3. How many subnets are possible?

4. What is the total number of hosts per subnet?

5. How many usable hosts per subnet?

6. What is the new subnet mask?

7. What is the total number of net bits borrowed for creating subnet?

8. What is the total number of host bits needed for identifying total number of hosts per

subnet?

9. Fill in the table below by listing subnet numbers, the first, last usable host address, and

the broadcast address. Repeat until all addresses (Network Address, 1st Usable Host, Last Usable host and Broadcast Address) are listed for each subnet.

Note: You may not need to use all rows

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| **Subnet Number** | **Network Address** | **1st Usable Host** | **Last Usable host** | **Broadcast Address** |
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4. You are asked to set up a network for your company and one of the network IP address given to you by the system administrator is **194.167.177.1/25**.Based on the scenario, answer the following questions.

1. Which IP class does the given network IP address belong to?

2. What is the default subnet mask for the given network IP address? 3. How many subnets are possible?

4. What is the total number of hosts per subnet?

5. How many usable hosts per subnet?

6. What is the new subnet mask?

7. What is the total number of net bits borrowed for creating subnet?

8. What is the total number of host bits needed for identifying total number of hosts per

subnet?

9. Fill in the table below by listing subnet numbers, the first, last usable host address, and

the broadcast address. Repeat until all addresses (Network Address, 1st Usable Host, Last Usable host and Broadcast Address) are listed for each subnet.

Note: You may not need to use all rows

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| **Subnet Number** | **Network Address** | **1st Usable Host** | **Last Usable host** | **Broadcast Address** |
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