

LINUX NETWORKING MODULE 5 ASSESSMENT SOLUTION

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6) You are given three IP addresses: 10.1.1.1, 172.16.5.10, and 192.168.1.5.

- Task: Identify the class of each IP address (Class A, B, or C). What is the default subnet mask for each class?
- Provide the range of IP addresses for each class.

1. IP Address: 10.1.1.1

- Class: Class A
 - Class A IP addresses range from 0.0.0.0 to 127.255.255.255.
 - Class A starts with 0 to 127 in the first octet.
- Default Subnet Mask: 255.0.0.0 or /8
- **IP Address Range:**
 - Network Range: 0.0.0.0 - 127.255.255.255
 - Usable Range: 1.0.0.0 - 126.255.255.255
 - Broadcast Range: 127.0.0.0 - 127.255.255.255 (Loopback addresses)

2. IP Address: 172.16.5.10

- Class: Class B
 - Class B IP addresses range from 128.0.0.0 to 191.255.255.255.
 - Class B starts with 128 to 191 in the first octet.
- Default Subnet Mask: 255.255.0.0 or /16
- **IP Address Range:**
 - Network Range: 128.0.0.0 - 191.255.255.255
 - Usable Range: 128.0.0.1 - 191.255.255.254
 - Broadcast Range: 191.255.255.255

3. IP Address: 192.168.1.5

- Class: Class C
 - Class C IP addresses range from 192.0.0.0 to 223.255.255.255.
 - Class C starts with 192 to 223 in the first octet.
- Default Subnet Mask: 255.255.255.0 or /24

- **IP Address Range:**

- Network Range: 192.0.0.0 - 223.255.255.255
- Usable Range: 192.0.0.1 - 223.255.255.254
- Broadcast Range: 223.255.255.255