Question 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.

Approach

* In the first IP address we have

10.1.1.1

If we focus on first octet we have 10. From 1 to 126 it belongs to **class A**

**Therefore, 10.1.1.1 belongs to class A with subnet mask as 255.0.0.0**

* + **Broadcast address 126.255.255.255**
  + **Usable IP range 1.0.0.1 to 126.255.255.254**
* In second IP we have

172.16.5.10

If we take a close look we have first octet as 172 which falls under **Class B (128-191)**

**Therefore, 172.16.5.10 belongs to class B with sub netmask as 255.255.0.0**

* + **Broadcast address 191.255.255.255**
  + **Usable IP range 128.0.0.1 to 191.255.255.254**
* In third IP we have

192.168.1.5

If we take a close look we have first octet as 192 which falls under **Class C (192-223)**

**Therefore, 192.168.1.5 belongs to class B with sub netmask as 255.255.255.0**

* + **Broadcast address 223.255.255.255**
  + **Usable IP range 192.0.0.1 to 223.255.255.254**