

## Reading List for Quiz 1

All questions are based on Module 1

1) Identify whether the following MAC addresses are global or locally unique and also identify whether they are multicast or unicast addresses?

- a. 0B:5F:BC:AD:23:10
- b. 45:12:AB:12:CE:FF

2) What is the subnet mask for Class A, Class B and Class C IP addresses?

3) Consider the following IP addresses in the context of class-based addressing (i.e., Class A, B, C, D, etc). Identify whether the following is a network address, broadcast IP address, unicast IP address, multicast IP address or a private IP address:

- a) 143.132.10.1
- b) 229.0.1.2
- c) 16.1.255.255
- d) 10.1.1.1
- e) 172.18.12.34
- f) 202.14.12.255
- g) 156.25.32.0
- h) 202.45.69.0

4) What is a private IP address? Can it be used as the destination IP address to directly route a packet over the Internet? Why or why not? Justify your answer.

5) What is the basic difference between subnetting and CIDR?

6) Consider the following IP addresses in the context of classless addressing (subnetting and CIDR). Identify whether the following is a subnet/network address, broadcast IP address or a unicast IP address:

- a) 212.40.90.63 /26
- b) 156.23.80.0 /20
- c) 199.34.56.32 /27
- d) 213.45.1.12 /28
- e) 143.132.7.255 /21

7) Why CIDR prefers to use a group of contiguous address spaces (say contiguous Class C networks) rather than arbitrary address spaces (i.e., arbitrarily chosen Class C networks)? In other words, what is the advantage with the first approach compared to the second approach?