**Linux Quiz-3**

1. What is the Network ID, Broadcast Address, and first & last valid IP on the subnetwork that the host 192.168.1.15/26 belongs to?

2. What is the broadcast address of network 10.14.64.0/20?

ANS:10.14.79.255

3. Which of the following is a valid IP host address given the network ID of 191.254.0.0 while using 11 bits for subnetting?

a. 191.254.0.32

b. 191.254.0.96

c. 191.254.1.29

d. 191.54.1.64

ANS:a,c

4. List the valid host range for subnet 192.168.15.48/28.

ANS:192.168.15.49 - 192.168.15.62

5. What is DNS and explain it's usefulness.

ANS: Domain Name Servers (**DNS**) are the Internet's equivalent of a phone book. They maintain a directory of domain names and translate them to Internet Protocol (IP) addresses. This is necessary because, although domain names are easy for people to remember, computers or machines, access websites based on IP addresses.

6. Explain the purpose of NS records and CNAME records in DNS?

ANS: CNAME acts like alias names for websites,ex: [www.1google.com](http://www.google.com) reidirects to [www.google.com](http://www.google.com)

7. Describe the purpose of load balancing and list out the load balancing algorithms.

ANS:Load balancing refers to efficiently distributing incoming network traffic across a group of back-end servers, also known as a “server farm” or “server pool”.

load balancing algorithms are: Round-robin,Least connections,IP hash

8. List out the benefits of Proxy Server.

ANS :a proxy server is a [server](https://en.wikipedia.org/wiki/Server_(computing)) or a computer system or an application that acts as an [intermediary](https://en.wikipedia.org/wiki/Intermediary) for requests from [clients](https://en.wikipedia.org/wiki/Client_(computing)) seeking resources from other servers.

9. What is NAT and explain it's purpose.

Refer material.

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10. Explain terms a) TLD b) FQDN c) subdomain in DNS

Refer Material

ANS:A top-level domain (TLD) is one of the [domains](https://en.wikipedia.org/wiki/Domain_name) at the highest level in the hierarchical [Domain Name System](https://en.wikipedia.org/wiki/Domain_Name_System) of the [Internet](https://en.wikipedia.org/wiki/Internet)

A fully qualified domain name (FQDN), sometimes also referred to as an *absolute domain name*,is a [domain name](https://en.wikipedia.org/wiki/Domain_name) that specifies its exact location in the tree hierarchy of the Domain Name System