**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?

Ans.

NetworkID : 192.168.0.0

Broadcast Address: 192.168.255.255

First valid IP: 192.168.1.1

Last valid IP: 192.168.255.254

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

Ans.

10.14.255.255

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. B

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

Ans.

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

Ans.

Domain name system. It controls particular domain name of a website and email settings. It is a hierarchical distribution system for computers, servers and internet connections. The Internet however, is really based on IP addresses. Every time we use a domain name, therefore, a DNS service must translate the name into the corresponding IP address.

Example: www.google.com

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

Ans.

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

8. List out the benefits of Proxy Server.

A proxy server is a computer or usually set of computers that act as an intermediary between a client computer and a web server. It enables client computers to make indirect requests through it for resources or services such as web page

Web proxies can speed up access to frequently accessed web pages, by building a cache of frequently requested web pages or files. By speeding up the network traffic, it also provides needed reliefs to server load.

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

Refer material.

Ans.

Network Address Translation (NAT) is a way to map an entire network (or networks) to a single IP address. NAT is necessary when the number of IP addresses assigned to you by your Internet Service Provider is less than the total number of computers that you wish to provide Internet access for.

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

Refer Material

TLD is a one of the domain at the highest level in the hierarchical domain name system.  example .com, .edu, .in

A fully qualified domain name (FQDN) is the complete domain name for a specific computer, or host, on the Internet. The FQDN consists of two parts: the hostname and the domain name. For example, an FQDN for a hypothetical mail server might be mymail.google.com

sub domain is internal directory of main domain, it is sub pages of webpages.