Here are the **questions in bold exactly as shown**, followed by their **answers**:

**What are forward and reverse lookup?**

* **Forward Lookup**: Resolves a domain name to an IP address using A or AAAA records.
* **Reverse Lookup**: Resolves an IP address to a domain name using PTR records.

**What is the Authoritative DNS server?**\ An **Authoritative DNS Server** holds the actual DNS records for a domain and responds to queries with definitive answers. It is responsible for providing responses to queries about domains it manages.

**What is DNS spoofing?**\ **DNS Spoofing** (or DNS cache poisoning) is a cyberattack where false DNS data is inserted into a DNS resolver's cache, causing users to be redirected to malicious sites.

**What are resource records in DNS?**\ **Resource Records (RRs)** are entries in a DNS zone file that define mappings between domain names and IP addresses or other data. Examples include:

* A (IPv4 address)
* AAAA (IPv6 address)
* MX (Mail Exchange)
* CNAME (Canonical Name)
* PTR (Reverse lookup)
* NS (Name Server)

**What is TTL, and what is suitable TTL for your DNS?**\ **TTL (Time To Live)** is the duration (in seconds) that a DNS record is cached by resolvers.

* A suitable TTL depends on the nature of the record:
  + **Short TTL (300s)** for frequently changing records
  + **Long TTL (86400s)** for stable records

**Explain the steps to configure Caching Name Server**

1. Install BIND: yum install bind bind-utils
2. Configure /etc/named.conf for caching
3. Set up /var/named/named.ca for root hints
4. Start and enable the service:
5. systemctl start named
6. systemctl enable named
7. ¨G0G

It validates the syntax of the configuration file.

**How can you diagnose and address issues related to DNS resolution on a Linux machine?**

* Use tools like dig, nslookup, host
* Check /etc/resolv.conf for correct DNS entries
* Verify network connectivity
* Restart network or named services
* Check firewall and SELinux settings

**Mention some of the trouble shooting tips to resolve the DNS related issues**

* Clear DNS cache: systemd-resolve --flush-caches
* Check DNS server availability
* Use alternate DNS like Google (8.8.8.8)
* Inspect logs: /var/log/messages, /var/log/named/
* Validate zone files with named-checkzone

**Where to Find Configuration Directories for Apache?**

* Main config file: /etc/httpd/conf/httpd.conf
* Additional configs: /etc/httpd/conf.d/
* Document root: /var/www/html

**How to Change the Default Apache Port?**

1. Edit /etc/httpd/conf/httpd.conf
2. Change Listen 80 to Listen <new\_port>
3. Update firewall rules
4. Restart Apache: systemctl restart httpd

**Explain the different Methods to host multiple Apache Web Servers on a Single Server?**

* **Name-based Virtual Hosting**: Multiple domains share one IP
* **IP-based Virtual Hosting**: Each domain has a unique IP
* **Port-based Hosting**: Different sites served on different ports

**What Are The Different Log Files of Apache? And where you will find these log files**

* **Access Log**: /var/log/httpd/access\_log
* **Error Log**: /var/log/httpd/error\_log\ These logs help in monitoring and troubleshooting.

**What Does “Connection Reset by Peer” Mean in Apache? And how do you troubleshoot**\ It means the remote server closed the connection unexpectedly.\ **Troubleshooting steps**:

* Check Apache logs
* Verify firewall and network settings
* Inspect client behavior
* Look for timeout or SSL issues

**What is Virtual Host in Apache and How to Configure it?**\ A **Virtual Host** allows Apache to serve multiple websites from a single server.\ **Configuration steps**:

1. Create a config file in /etc/httpd/conf.d/
2. Define <VirtualHost> block with ServerName, DocumentRoot
3. Restart Apache: systemctl restart httpd

Would you like all sessions compiled into a single PDF or formatted as a study guide?