1.What is DNS? How does DNS work on internet.

A) DNS, or the Domain Name System, translates human readable domain names (for example, www.amazon.com) to machine readable IP addresses (for example, 192.0.2.44).

The Internet's DNS system works much like a phone book by managing the mapping between names and numbers. DNS servers translate requests for names into IP addresses, controlling which server an end user will reach when they type a domain name into their web browser. These requests are called queries.

2.What is Route53. What are the features and advantages of Route53.

A) Amazon Route 53 is a highly available and scalable [Domain Name System (DNS)](https://aws.amazon.com/route53/what-is-dns/) web service. Route 53 connects user requests to internet applications running on AWS or on-premises.

**Amazon Route 53 features**

* Traffic flow. ...
* Latency based routing. ...
* IP-based routing. ...
* Geo DNS. ...
* Private DNS for Amazon VPC. ...
* DNS Failover. ...
* Health Checks and Monitoring.

Advantages:

* Highly available
* Flexible
* Scalable
* Fast
* Cost effective
* Secure

3.What are the types of routing policies in Route53.

A) Simple routing.

Failover routing.

Geolocation routing. Geolocation routing in private hosted zones.

Geoproximity routing (traffic flow only)

Latency-based routing. Latency-based routing in private hosted zones.

IP-based routing.

Multivalue answer routing.

Weighted routing.

4.Define the commonly used ports. Give port# used for ssh, http, https, dns, smtp, telnet, ms-sql port, mysql port.

A) SSH port 22  
The port is used for Secure Shell (SSH) communication and allows remote administration access to the VM.

HTTP: 80,8080 ports

HTTPS: 443 ports

**DNS** (Domain Name System) : 53 ports

**SMTP** (Simple Mail Transfer Protocol) : 1610ports

Used for **TELNET : 23 ports**

5. What are A-Name and CName records.

A) The "A" stands for "address" and this is the most fundamental type of DNS record: it indicates the IP address of a given domain. For example, if you pull the DNS records of cloudflare.com, the A record currently returns an IP address of: 104.17. 210.9.

CNAME records can be used to alias one name to another. CNAME stands for Canonical Name. A common example is when you have both example.com and www.example.com pointing to the same application and hosted by the same server.

6.What is Elastic Beanstalk. What are the features and benefits of Elastic Beanstalk.

A) Elastic Beanstalk is a service for deploying and scaling web applications and services. Upload your code and Elastic Beanstalk automatically handles the deployment—from capacity provisioning, load balancing, and auto scaling to application health monitoring.

Benefits: AWS Elastic Beanstalk makes it even easier for developers to quickly deploy and manage applications in the AWS Cloud.

* **AWS Elastic Beanstalk**
* Application platform management.
* Capacity provisioning.
* Load Balancing.
* Auto Scaling.
* Code deployment.
* Health Monitoring.

7. What is difference between EC2 and Elastic Beanstalk? What are the Elastic Beanstalk Components.

A) **AWS EC2:**

* **EC2 is a service of Amazon which helps you to create and launch servers in the Amazon cloud.**
* **These servers are called instances and they are configured behind a load balancer when we create a Beanstalk application**
* **With a single instance, we can launch n number of instances.**
* **You pay for the time and for what you have used.**

**AWS Elastic Beanstalk**

* **A Beanstalk infrastructure contains EC2 instances, databases, security and scaling groups and many more AWS components.**
* **It is beneficial for the purpose of deploying elastic cloud applications.**
* **Beanstalk doesn’t charge for the additional resources you have been provided with.**
* **Elastic Beanstalk supports a PHP stack. You can keep your site in version control and easily deploy to your environment whenever you make changes**

8.Deploy an node. js sample application using Elastic Beanstalk and list the difference resources created from the application.

A) AWS Elastic Beanstalk for Node.js makes it easy to deploy, manage, and scale your Node.js web applications using Amazon Web Services. Elastic Beanstalk for Node.js is available to anyone developing or hosting a web application using Node.js.

This chapter provides step-by-step instructions for deploying your Node.js web application to Elastic Beanstalk using the Elastic Beanstalk management console, and provides walkthroughs for common tasks such as database integration and working with the Express framework.

9.Explain the difference between Geolocation, Geolatency and Failover based routing policy.

A) **Geolocation routing policy** – Use when you want to route traffic based on the location of your users. You can use geolocation routing to create records in a private hosted zone.

**Latency routing policy** – Use when you have resources in multiple AWS Regions and you want to route traffic to the region that provides the best latency. You can use latency routing to create records in a private hosted zone.

**Failover routing policy** – Use when you want to configure active-passive failover. You can use failover routing to create records in a private hosted zone.

10. Register a sample domain (on GoDaddy ref-1, for less than Rs.199/- for yourself) and point the same to your EC2 instance.

A) **Add a custom domain managed by GoDaddy**

* In the DNS Records section, choose Add.
* For Type, choose CNAME.
* For Name, enter only the subdomain. For example, if your subdomain is www.example.com, enter www for Name.
* For Value, look at your DNS records in the Amplify console and then enter the value.
* Choose Add record.