1. **How many number of ec2 instances can be attached to a multi-attach EBS volume?**

   Ans-> 16 EC2 instances at a time.

2. **Why use a Load Balancer?**

   Ans->
   - Spread load across multiple downstream instances
   - Expose a single point of access (DNS) to your application
   - Seamlessly handle failures of downstream instances
   - Do regular health checks to your instances
   - Provide SSL termination (HTTPS) for your websites
   - Enforce stickiness with cookies
   - High availability across zones
   - Separate public traffic from private traffic

3. **Latency difference between NLB and ALB**

   Ans-> 100ms for NLB and 400ms for ALB

4. **when application needs to be accessed only with few specific static IPs**

   Ans-> think of NLB

5. **What is the use of X-Forwarded-For header, X-Forwarded-Port header and X-Forwarded-Proto header?**

   Ans->
   - ***X-Forwarded-For header*** - this is used to get the IP address of clients connected to your website.
   - ***X-Forwarded-Port header*** - this is used to get the port number of clients connected to your website.
   - ***X-Forwarded-Proto header*** - this is used to get the protocol of clients connected to your website.

6. **Health check supports which protocols?**

   Ans-> Health checks support the TCP, HTTP and HTTPS Protocols.

7. **Which protocols does Application Load Balancer supports?**

   Ans-> HTTP, HTTPS and WebSocket

8. **NLB supports which health checks?**

   Ans-> NLB supports HTTP health checks as well as TCP and HTTPS

9. **Which load balancer uses GENEVE protocol on port 6081?**

Ans-> Gateway Load Balancer

10. **What are the different types of cookies available in Sticky sessions?**

Ans-> Application-based Cookies & Duration-based Cookies

11. **While creating custom application-based cookie in your Application Load Balancer. Which cookie name cannot we use?**

Ans-> The following cookie names are reserved by the ELB (**AWSALB**, **AWSALBAPP**, **AWSALBTG**),
so, we cannot use these cookie names.

12. **Explain about Cross-Zone Load Balancing pricing and enabling.**

Ans->

- **ALB**-> enable by default and no charges for inter AZ data
- **NLB & GWLB** -> disable by default and you pay extra charges ($) for inter AZ data if enabled.
- **CLB** -> disable by default and no charges for inter AZ data if enabled.

13. **The Load Balancer uses which SSL/TLS certificate?**

Ans-> It uses an X.509 SSL/TLS certificate.

14. **Which AWS service is used to manage certificates?**

Ans-> ACM (AWS Certificate Manager)

15. **What is SNI?**

Ans-> SNI (Server Name Indication) solves the problem of loading multiple SSL certificates onto one web server (to serve multiple websites)

It's a "newer" protocol and requires the client to indicate the hostname of the target server in the initial SSL handshake.

The server will then find the correct certificate, of return the default one.

Note--> It's only work for ALB and NLB (newer generation), CloudFront.

It doesn't work with CLB (older generation).

16. For Disaster recovery, can we set up Read Replicas as Multi AZ?

Ans-> Yes, we can.

Note: Read Replicas are ASYNC replication and Multi AZs are SYNC replication.

17. How do we make a RDS database from Single-AZ to Multi-AZ?

Ans->

- It's zero-downtime operation (no need to stop the DB).
- Just click on "modify" for the database and enable Multi-AZ.

18. What are the things that can we do while using RDS Custom for Oracle and Microsoft SQL Server?

Ans-> In RDS Custom we have access to the underlying database and OS so we can do the followings:

- Configure settings
- Install patches
- Enable native features
- Access the underlying EC2 Instance using SSH or SSM Session Manager

Note:-> De-activate Automation Mode to perform your customization, better to take a DB snapshot before.

19. In which amount Aurora storage grows automatically?

Ans-> Aurora storage automatically grows in increments of 10GB, up to 128TB.

a.

20. How many replicas can Aurora have?

Ans-> Aurora can have up to 15 replicas and the replication process is faster than MySQL (sub 10ms replica lag).

21. How much Aurora is costlier than compared to RDS?

Ans-> Aurora costs 20% more than RDS but is more efficient.

22. Explain Aurora High Availability and Read Scaling.

Ans->

- 6 copies of your data across 3 AZ:
  - 4 copies out of 6 needed for writes
  - 3 copies out of 6 needs for reads
  - Self-healing with peer-to-peer replication