Cloud Computing Sample Questions

1. How does cloud computing impact the overall cost structure for businesses compared to traditional IT infrastructure?

2. Discuss the Key Benefits of Adopting Cloud Computing with a Suitable Example.

3. How do cloud service models such as SaaS, PaaS, and IaaS differ from each other?

4. Discuss various Cloud Computing Deployment Models with a Suitable Example.

5. Discuss Six AWS Cloud Adoption Framework with a Suitable Example.

6. Buddha Air is planning to move its entire Infrastructure from On-premises to Cloud based Infrastructure. Identify and compare the Total Cost of Ownership (TCO) for on-premises and cloud based infrastructure. The Total Cost of Ownership should include Server Costs, Storage Cost, Network Cost and IT Labor Cost.

7. Discuss the importance of Identity and Access Management in Cloud Computing with a Suitable Example.

8. Discuss the Shared Security Model in Cloud Computing with a Suitable Example.

9. You have a small business with a website that is hosted on an Amazon Elastic Compute Cloud (Amazon EC2) instance. You have customer data that is stored on a backend database that you want to keep private. You want to use Amazon VPC to set up a VPC that meets the following requirements:
   a. Your web server and database server must be in separate subnets.
   b. The first address of your network must be 10.10.1.0. Each subnet must have 254 total IPv4 addresses.
   c. Your customers must always be able to access your web server.
   d. Your database server must be able to access the internet to make patch updates.
   e. Your architecture must be highly available and use at least one custom firewall layer.
   f. Design the architecture with brief explanation of each services used.

10. Discuss the Amazon EC2 Instance Lifecycle with a suitable diagram.

11. Discuss the Four Pillars of Cost Optimization for Compute Services with a suitable example.

12. Differentiate Containers with Virtual Machines with a suitable architecture.

13. *Serverless compute plays a vital role in cloud computing environment*. Justify with reference to AWS Lamda Function.

14. Discuss the importance of Block Storage and Object Storage in Cloud Computing Architecture. How Elastic Block Storage can be attached to specific EC2 instance running Linux/Windows Operating System?

15. Your company have two VPC running in different AWS Regions. Each VPC has Private and Public Subnets. You are required to exchange information between instances running in Private Subnets. Design the VPC Peering with appropriate services.

16. Your company has on-premises Data Center and Cloud Data Recovery Center. The private network of on-premises Data Center need to communicate with private subnet of Cloud Data Recovery Center. Design the architecture of Site to Site VPN in AWS Cloud and on-premises Data Center to enable secured private communication between two private subnets.

17. Discuss the role of Security Group in a Cloud Computing Environment with a Suitable Example.

18. Discuss the role of Load Balancer in Cloud Computing Environment. Design the Load Balancer with AWS ELB with a suitable example.

19. When you run your applications on Cloud, you want to ensure that your architecture can scale to handle changes in demand. Discuss how to automatically scale your EC2 instances with Amazon EC2 Auto Scaling.

20. Discuss the importance of combining Load balancing with Auto Scaling in cloud computing environment.

21. How multiple containers can be deployed with the aid of Docker Compose in EC2 instance. Justify with a suitable example.

22. Discuss Six Pillars of AWS Well-Architected Framework with a suitable example.

23. Explain the importance of reliability metrics like MTTF, MTTR, and MTBF in the context of cloud computing, supported by a relevant example.

24. Discuss the importance of availability tiers with a suitable example.

25. An organization aims to host multiple web services using containers. Explain how Docker Compose can be utilized for deployment, including a relevant example.