

| Q.No. | Question                                                                                                                                                                                                                                                                                                                 | Max Marks |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| 1.    | A multinational corporation is planning to expand its IT infrastructure globally. Discuss how the principles of cloud computing and the design of a major cloud provider's global infrastructure could address the company's needs for scalability, reliability, and low-latency access for its international user base. | 10        |
| 2.    | A large e-commerce platform is experiencing rapid growth and needs to ensure its infrastructure can handle varying workloads securely. Propose a design for the system that would allow the platform to scale efficiently while maintaining strong security practices.                                                   | 10        |
| 3.    | Cloud architects often face the challenge of managing fluctuating workloads. AWS provides a solution that automatically adjusts the number of computational resources based on predefined conditions. Explain this service in detail with neat diagram.                                                                  | 10        |
| 4.    | In the context of AWS storage solutions, there exists a service designed for long-term data archival with retrieval times ranging from minutes to hours. This service is often used for compliance and backup purposes. Identify this service and discuss its cost-effectiveness compared to other storage options.      | 10        |
| 5.    | Load distribution is a critical aspect of high-availability architectures. AWS provides a service that automatically distributes incoming application traffic across multiple targets, such as EC2 instances. Explain this service and how it enhances the reliability and fault tolerance of applications in the cloud. | 10        |

| S.No. | Question                                                                                                                                                                                                                                                                                                                                                                                                    |
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| 1.    | During a recent brainstorming session with the tech team, the CTO of SS tech suggested to change the IT architecture to increase the performance, resilience and scalability. As a cloud analyst suggest the best fault tolerant solution to cater to these requirements. Can AWS Global Infrastructure be implemented? Discuss.                                                                            |
| 2.    | Weather modeling is a computation-intensive problem that requires complex data management and analysis. Processing massive amounts of weather data on a single computer is slow and time consuming. In order to perform an effective processing of such massive data, the organization plan to deploy AWS cloud model. As a tech evangelist, discuss the AWS Shared Responsibility Model for this scenario. |
| 3.    | Post Covid, most of the organizations opt for a cost optimal solution. One such organization is planning to revamp its HR portal to optimize its performance based on unpredictable workloads. Discuss the deployment of EC2 instance and suggest the best type of instance for this scenario.                                                                                                              |
| 4.    | VIT is planning to deploy an Object Storage as a Service for efficiently managing its data. Suggest various scenarios on how this storage service can be used.                                                                                                                                                                                                                                              |
| 5.    | There was a trouble ticket raised by the employees that their website content wasn't displayed properly due to network lag. Discuss with a simple architecture how CDN can be deployed for resolving this ticket.                                                                                                                                                                                           |