

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA- SEMESTER - IV-EXAMINATION- SUMMER-2023

Subject Code: 4549252**Date: 27/06/2023****Subject Name: Cloud Computing****Time: 10:30 AM TO 01:30 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make Suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Use of simple calculators and non-programmable scientific calculators are permitted.

- Q.1 (a)** Give definition of following terms: **14**
1. Grid computing
 2. Physical layer
 3. Multimedia cloud
 4. Web based Aps
 5. On demand computing
 6. SOA
 7. Jungle cloud
- Q.2 (a)** Explain various technologies which are used in Cloud platform with necessary examples. **07**
- (b)** Explain various types of cloud with necessary examples. **07**
- OR**
- (b)** Explain major differences between “IaaS”, “PaaS”, & “SaaS” with suitable examples. **07**
- Q.3 (a)** Explain various types of virtualization with necessary examples. **07**
- (b)** Explain various components of Apache Hadoop and also discuss why there is need of Apache Hadoop? **07**
- OR**
- Q.3 (a)** Explain role of virtualization in Grid and Cloud computing. **07**
- (b)** Explain various methods one can adopt for security in cloud computing. **07**
- Q.4 (a)** Explain various cloud management and monitoring tools with necessary examples. **07**
- (b)** Explain SOA Foundation with necessary examples. **07**
- OR**
- Q.4 (a)** “Cloud computing is the future of mobile devices” - Critically Evaluate the statement. **07**

- (b) “Your data should be protected from unauthorized access regardless of your cloud decisions” - Critically Evaluate the statement. **07**

Q.5 Airbnb is a community marketplace that allows property owners and travelers to connect with each other for the purpose of renting unique vacation spaces around the world. The Airbnb community users’ activities are conducted on the company’s Website and through its iPhone and Android applications. The San Francisco-based Airbnb began operation in 2008 and currently has hundreds of employees across the globe supporting property rentals in nearly 25,000 cities in 192 countries. A year after Airbnb launched, the company decided to migrate nearly all of its cloud computing functions to Amazon Web Services (AWS) because of service administration challenges experienced with its original provider. According to Nathan Blecharczyk, Co-founder & CTO of Airbnb “Initially, the appeal of AWS was the ease of managing and customizing the stack. It was great to be able to ramp up more servers without having to contact anyone and without having minimum usage commitments. As our company continued to grow, so did our reliance on the AWS cloud and now, we’ve adopted almost all of the features AWS provides.” **14**

Airbnb has grown significantly over the last 3 years. To support demand, the company uses 200 Amazon Elastic Compute Cloud (Amazon EC2) instances for its application, memcache, and search servers. Within Amazon EC2, Airbnb is using Elastic Load Balancing, which automatically distributes incoming traffic between multiple Amazon EC2 instances. To easily process and analyze 50 Gigabytes of data daily, Airbnb uses Amazon Elastic MapReduce (Amazon EMR). Airbnb is also using Amazon Simple Storage Service (Amazon S3) to house backups and static files, including 10 terabytes of user pictures. To monitor all of its server resources, Airbnb uses Amazon CloudWatch, which allows the company to easily supervise all of its Amazon EC2 assets through the AWS Management Console, Command Line Tools, or a Web services API. In addition, Airbnb moved its main MySQL database to Amazon Relational Database Service (Amazon RDS).

- Q.5** (a) How AWS helped Airbnb to reduce their expenses? **07**
(b) Do you agree that flexibility and responsiveness of AWS is helped Airbnb to prepare for more growth? **07**

OR

- (a) Critically evaluate Airbnb’s decision to adopt AWS system for their operations. **07**
(b) Which types of other services Airbnb can use from cloud computing service providers? **07**
