School of Computing Science and Engineering

Master of Computer Applications
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem II - E1PZ201T - Introduction to Cloud Computing

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	When would you recommend a public cloud deployment over a private cloud deployment, and vice versa?	K1(2)
2)	Evaluate the impact of regulatory compliance requirements on data security in cloud storage.	K2(4)
3)	Discuss the challenges associated with ensuring data consistency in distributed cloud storage systems.	K2(6)
4)	Implement a performance monitoring system for measuring and optimizing QoS parameters in a cloud-based application.	K3(9)
5)	Design a comprehensive security architecture for a hybrid cloud deployment that incorporates threat detection, encryption, and access control mechanisms.	K3(9)
6)	Conduct a comparative analysis of different sensor data aggregation techniques in sensor cloud computing.	K5(10)
7)	A) What are the Security Issues in Cloud Computing ? B) Describe the Security Resoponsibilities.	K4(12)
8)	Suppose a cloud service provider offers two different types of virtual machines (VMs) for rent: VM type A and VM type B. The CPU utilization (in percentage) of these VMs over a period of time is recorded as follows: For VM type A: 20%, 25%, 22%, 30%, 28% For VM type B: 10%, 15%, 18%, 20%, 25% Calculate the coefficient of variation (CV) for the CPU utilization of each VM type and interpret the results.	K5(15)
9)	A) Discuss the data model used in Bigtable and how it differs from traditional relational databases. B) If each row in a Bigtable has an average size of 1 KB and you have 1 million rows, what is the total storage capacity required for storing all the data?	K5(15)
10)	A) Analyze the impact of network latency on data transfer speeds and access times in cloud storage systems. B) Compare the security features of different cloud storage providers, such as AWS S3, Azure Blob Storage, and Google Cloud Storage	K6(18)