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MTECH
(SEM I) THEORY EXAMINATION 2023-24
CLOUD COMPUTING

TIME: 3HRS

M.MARKS: 70

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	Explain the innovative characteristic of Cloud computing.
b.	List the examples of public and private cloud.
c.	Discuss the working of Virtual Machine monitor?
d.	Explain load balancer in AWS.
e.	Explain the role of virtualization in IaaS.
f.	Differentiate between monolithic and microservices in cloud computing.
g.	Discuss the security services in the cloud.

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	Explain the importance of cloud computing and elaborate the different types of services offered by it.
b.	Classify the taxonomy of virtualization. Explain hardware virtualization techniques.
c.	Examine the role of Identity & Access Management in cloud computing.
d.	Is Eucalyptus suitable for small businesses or only large enterprises? Explain.
e.	Discuss the Service Level Agreements (SLAs) in Cloud Computing and its importance.

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

a.	Illustrate NIST Cloud computing reference architecture in details.
b.	Discuss the significance of cloud characteristics in enabling scalability and flexibility.

4. Attempt any *one* part of the following: 7 x 1 = 7

a.	Explain different deployment models of cloud computing. Also explain its advantages and disadvantages.
b.	Illustrate the key principles of REST (Representational State Transfer). How does REST differ from traditional web service architectures?

5. Attempt any *one* part of the following: 7 x 1 = 7

a.	Analyze the role of Hypervisor in virtualization. Also explain different types of hypervisors.
b.	Design and implement a storage-as-a-service solution for a business, addressing data redundancy and access control.

6. Attempt any *one* part of the following: 7 x 1 = 7

a.	Illustrate the concept of billing and accounting in cloud computing.
b.	Analyze and comment on "Cloud computing help to reduce the time to market applications and to cut down capital expenses".

7. Attempt any *one* part of the following: 7 x 1 = 7

a.	Discuss the role of access control, trust, and authentication in cloud computing security.
b.	Describe jurisdictional issues raised by data location in cloud computing.