Roll No: ☐☐☐☐☐☐☐☐☐☐☐☐☐

MTECH
(SEM I) THEORY EXAMINATION 2024-25
CLOUD COMPUTING

TIME: 3 HRS   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.	List any three business drivers for adopting cloud computing.
b.	Mention two advantages and two disadvantages of Cloud Computing.
c.	What is the Cloud Computing Stack?
d.	What are Web Services, and how do they support Cloud Computing?
e.	What is virtualization in Cloud Computing?
f.	What is the difference between fixed and pay-as-you-go billing models?
g.	How does data location affect compliance and security?

SECTION B

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

a	Compare and contrast Grid Computing, Cluster Computing, and Cloud Computing.
b.	Classify the taxonomy of virtualization. Explain hardware virtualization techniques.
c.	Illustrate the process of virtual machine provisioning and management in an IaaS environment.
d.	Compare and contrast traditional scaling methods with cloud-based scaling approaches
e.	Explain how firewalls and intrusion detection systems enhance network-level security in the cloud

SECTION C

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

| a. | What are the different cloud deployment models, and how do they differ? |
| b | Discuss the recent trends in computing and their impact on modern IT infrastructure |

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

| a. | Draw and explain the architecture of Cloud Computing. |
| b | Explain how Web Services support Cloud Computing. Provide examples of widely used Web Services. |

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

| a. | Illustrate NIST Cloud computing reference architecture in details |
| b. | Discuss the impact of SaaS on businesses and IT management. |

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

| a. | Analyze and comment on "Cloud computing help to reduce the time to market applications and to cut down capital expenses" |

Roll No: ☐☐☐☐☐☐☐☐☐☐☐☐☐

| b. | Discuss an SLA from a cloud provider and explain how it impacts service quality. |

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

| a. | It is said, 'cloud computing can save money'. What is your view? Can you name some open source cloud computing platform databases? Explain any one database in detail. |
| b. | Discuss the Infrastructure-as-a-Service, Platform as a service and Software as a service. |