

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Regular/Supplementary Examinations OCT/NOV 2025
CLOUD COMPUTING WITH AWS

(OPEN ELECTIVE)

Time: 3 hours

Max. Marks: 70

Answer any **FIVE** Questions. **ONE** Question from **Each unit**

All Questions Carry Equal Marks

UNIT-I

1. a) Define cloud computing and explain its key characteristics. [7M]
b) Illustrate the economic benefits and Total Cost of Ownership (TCO) in cloud computing. [7M]

(OR)

2. a) Describe the major goals and challenges of adopting cloud computing. [7M]
b) Analyze how cloud computing supports scalability and resource elasticity [7M]

UNIT-II

3. a) Explain the characteristics, advantages, and limitations of SaaS. [7M]
b) Discuss the importance of integration services in SaaS model. [7M]
- (OR)
4. a) Compare IaaS and PaaS with suitable examples of real-time applications. [7M]
b) Analyze the role of virtualization in implementing IaaS solutions. [7M]

UNIT-III

5. a) Define virtualization and explain how abstraction is achieved in cloud environments. [7M]
b) Differentiate between Type-I and Type-II hypervisors with examples. [7M]
- (OR)
6. a) Demonstrate how load balancing improves performance in virtualized systems. [7M]
b) Analyze the advantages and limitations of virtualization in cloud architecture. [7M]

UNIT-IV

7. a) List and describe key AWS services under Compute, Storage, and Networking. [7M]
b) Explain AWS Identity and Access Management (IAM) and its role in security. [7M]
- (OR)
8. a) Discuss how AWS provides elasticity and scalability using Auto Scaling and Load Balancer. [7M]
b) Evaluate the effectiveness of AWS management tools in monitoring cloud infrastructure. [7M]

UNIT-V

9. a) Explain the core concepts of High Availability and Fault Tolerance in AWS system design. [7M]
- b) Describe Well-Architected best practices focusing on Security and Reliability pillars. [7M]

(OR)

10. a) Discuss Event-Driven and Serverless architectures with suitable AWS examples. [7M]
- b) Create a simple architecture design pattern that ensures cost optimization and scalability. [7M]
