

Code No: **R2041420**

R20

SET - 1

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY GURAJADA VIZIANAGARAM
IV B. Tech I Semester Advanced Supplementary Examinations March 2025
CLOUD COMPUTING

(AI&DS, AI&ML, CSE(AI), CSE(DS), CSE(AI&ML) and CSE-(AI&DS))

Time: 3 hours

Max. Marks: 70

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

All Questions Carry Equal Marks

UNIT-I

1. a) Explain how the scalable computing over the internet improve fault tolerance and reliability in cloud computing. [7M]
b) Describe network function virtualization (NFV) and how does it enhance network-based systems in cloud computing. [7M]
(OR)
2. a) Distinguish between centralized, decentralized and distributed system models? [7M]
b) Explain the main security challenges in cloud computing and how do they impact energy efficiency? Explain. [7M]

UNIT-II

3. a) Analyze different implementation levels of virtualization in cloud computing? [7M]
b) Explain some emerging virtualization mechanisms or tools that are shaping the future of virtualization in the cloud. [7M]
(OR)
4. a) Describe virtual cluster and how does it differ from a physical cluster in cloud computing? [7M]
b) Illustrate the concept of virtualization for data-centre automation in detail? [7M]

UNIT-III

5. a) Discuss the different service models in cloud computing. [7M]
b) Explain the public cloud platforms support different programming languages and development frameworks. [7M]
(OR)
6. a) Describe programming languages are supported by Amazon AWS and Microsoft Azure. [7M]
b) Explain Service-Oriented Architecture (SOA) in detail. [7M]

UNIT-IV

7. a) Explain some common mechanisms for monitoring and managing resource utilization in a cloud environment. [7M]
b) Describe some common control algorithms and techniques used in task scheduling on a cloud platform? [7M]
(OR)
8. a) Discuss the factors contribute to the stability of two-level resource allocation architecture. [7M]
b) Explain the fair queue scheduling algorithm with the help of an example. [7M]

UNIT-V

9. a) Explain the key features and benefits of using block storage in cloud storage models. [7M]
b) Describe Distributed File systems in detail? [7M]
(OR)
10. a) Explain the concept and advantages of hierarchical storage management (HSM) in cloud storage models. [7M]
b) Write a short note on Google File system? [7M]
