

Code No: 157AW**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, February - 2025****CLOUD COMPUTING****(Common to CSE(AI&ML), CSE(N), AI&DS, AI&ML, CSD)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) Differentiate between high-performance computing and high-throughput computing. [2]
- b) How does bio-computing contribute to healthcare advancements? [3]
- c) What is the need for cloud computing in modern industries? [2]
- d) What role does virtualization play in delivering IaaS? [3]
- e) What is the significance of network connectivity in cloud computing? [2]
- f) Compare the pros and cons of centralized and decentralized cloud management. [3]
- g) What is vendor lock-in, and how does it impact PaaS users? [2]
- h) List the factors an organization consider when choosing a cloud service model. [3]
- i) What is Amazon Lambda? What is its primary use? [2]
- j) What are the steps involved in a CloudFormation solution? [3]

PART – B**(50 Marks)**

- 2.a) Compare and contrast cluster computing and grid computing.
 - b) Discuss the evolution of computing paradigms leading to cloud computing. [5+5]
- OR**
- 3.a) Discuss the role of distributed computing in modern cloud architectures.
 - b) Discuss why optical computing is critical for high-speed data transfer. [5+5]
- 4.a) Explain the reasons driving the adoption of cloud computing.
 - b) Differentiate between cloud computing as a service and as a platform. [5+5]
- OR**
- 5.a) Explain in detail the five essential characteristics of cloud computing.
 - b) Discuss the challenges in implementing cloud computing in organizations. [5+5]
- 6.a) Discuss the layered architecture of cloud computing with a neat sketch diagram.
 - b) Explain the challenges of managing cloud infrastructure in a multi-cloud environment. [5+5]
- OR**
- 7.a) Discuss the approaches to cloud migration and their suitability for different scenarios.
 - b) What are the key considerations in managing cloud-based applications? Explain. [5+5]

QA QA QA QA QA QA QA Q

- 8.a) Discuss any two services provided under IaaS with suitable examples.
- b) What are the core characteristics of SaaS, and how does it differ from traditional software? [5+5]

QA QA QA QA OR QA QA QA Q

- 9.a) Compare and contrast the suitability of IaaS, PaaS, and SaaS for different use cases.
- b) Explain how SaaS solutions ensure multi-tenancy and resource optimization. [5+5]

- 10.a) Compare the offerings of Amazon web services, Microsoft azure, and Google cloud.
- b) Explain the concept of “Knowledge as a Service (KaaS)” and its relevance in modern cloud offerings. [5+5]

QA QA QA QA OR QA QA QA Q

- 11.a) Explain the role of virtualization in IBM’s smart cloud platform.
- b) Discuss the role of VMware in enabling private and hybrid cloud solutions. [5+5]

QA QA QA QA ---ooOoo--- QA QA QA Q

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q

QA QA QA QA QA QA QA Q

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