

**Code No: 157AW****JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech IV Year I Semester Examinations, December-2023/January-2024****CLOUD COMPUTING****(Computer Science and Engineering – Artificial Intelligence and Machine Learning)****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) What are the advantages and limitations of parallel computing? [2]
- b) How do distributed computing systems handle synchronization? [3]
- c) How does on-demand self-service contribute to the agility of cloud computing? [2]
- d) Discuss the advantages of using cloud platforms for development and testing. [3]
- e) What does cloud management require and why is it important? [2]
- f) What factors should be considered when selecting applications for cloud deployment? [3]
- g) List any four SaaS providers. [2]
- h) List the factors to be considered when choosing an IaaS provider. [3]
- i) What is EMC and how does it contribute to the cloud computing landscape? [2]
- j) What is IBM smart cloud, and how does it cater to enterprise cloud needs? [3]

**PART – B****(50 Marks)**

- 2.a) Explain the significance of parallel processing in high-performance computing.
  - b) Explain the role of middleware in distributed computing. [5+5]
- OR**
- 3.a) Discuss different types of parallelism in computing.
  - b) Discuss the challenges associated with grid computing. [5+5]
- 4.a) Explain how scalability and flexibility contribute to the dynamic and variable workloads of cloud computing.
  - b) How does cloud computing provide a platform for building and deploying applications? Explain. [5+5]
- OR**
- 5.a) Explain how cloud computing meets the need for cost-effective and efficient IT solutions.
  - b) Discuss the different types of virtualizations in cloud computing. [5+5]
- 6.a) Explain the layers of cloud computing architecture and their functionalities.
  - b) How do datacenters contribute to the anatomy of the cloud? Explain. [5+5]
- OR**
- 7.a) Compare and contrast different approaches to cloud migration.
  - b) Explain the role of load balancing in managing the availability of cloud applications. [5+5]

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- 8.a) List and explain the key characteristics of IaaS.
- b) What are the advantages and disadvantages of adopting PaaS for application development? [5+5]

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**OR**

- 9.a) What is SaaS? How does it differ from IaaS and PaaS? Explain.
- b) Discuss the importance of interoperability between different cloud service models. [5+5]

- 10.a) Give an overview of Amazon Elastic Compute Cloud with its key features.
- b) Discuss the features and applications of SAP HANA cloud platform. [5+5]

**OR**

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- 11.a) How does VMware contribute to virtualization and cloud infrastructure? Explain.
- b) Describe the services and offerings provided by Rackspace in the cloud computing domain. [5+5]

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