

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. II Year II Semester Supplementary Examinations December-2025

INTRODUCTION TO CLOUD COMPUTING

(CSE with Specialization in Cloud Computing)

Time: 3 Hours

Max. Marks: 70

PART-A

(Answer all the Questions 10 x 2 = 20 Marks)

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|-----|---|-----|----|----|
| 1 a | List any two major challenges in implementing cloud computing in large-scale systems. | CO1 | L1 | 2M |
| b | Explain how clusters of cooperative computers contribute to distributed computing. | CO1 | L2 | 2M |
| c | Define cloud computing. Explain in detail about SaaS. | CO2 | L2 | 2M |
| d | Differentiate between Public Cloud and Private Cloud with one example each. | CO2 | L2 | 2M |
| e | What is virtualization in the context of cloud computing? | CO3 | L1 | 2M |
| f | Explain Virtual Clusters with its advantages. | CO3 | L2 | 2M |
| g | List the limitations of relational databases in cloud environments. | CO4 | L2 | 2M |
| h | What is multi-entity support in cloud-based database architecture. | CO4 | L1 | 2M |
| i | Explain about provider data and its security. | CO5 | L2 | 2M |
| j | Explain the difference between network-level and application-level security in the cloud. | CO5 | L1 | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|-----|--|-----|----|----|
| 2 a | Apply your understanding of Cluster Computing to describe how its components function together in a clustered environment. | CO1 | L3 | 5M |
| b | Discuss in detail about clusters of cooperative computers with neat diagram. | CO1 | L4 | 5M |

OR

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|-----|---|-----|----|----|
| 3 a | Differentiate between parallel and distributed computing Paradigms. | CO1 | L3 | 5M |
| b | Illustrate the evolution of scalable computing technology. | CO1 | L4 | 5M |

UNIT-II

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|-----|---|-----|----|----|
| 4 a | Illustrate in detail Infrastructure as a Service. | CO2 | L3 | 5M |
| b | Evaluate the benefits and limitations of PaaS in comparison to other cloud service models like IaaS and SaaS. | CO2 | L5 | 5M |

OR

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|-----|---|-----|----|----|
| 5 a | Explain the different types of Service Level Agreements (SLAs). | CO2 | L3 | 5M |
| b | Illustrate the Life Cycle of Service Level Agreement with neat diagram. | CO2 | L4 | 5M |

UNIT-III

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|-----|---|-----|----|----|
| 6 a | What is Hypervisor ? Illustrate about Hypervisor. | CO3 | L3 | 5M |
| b | Discriminate the Binary Translation with Full Virtualization. | CO3 | L4 | 5M |

OR

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|-----|--|-----|----|----|
| 7 a | Summarize the Memory Virtualization concept. | CO3 | L3 | 6M |
| b | Illustrate I/O Virtualization with an example. | CO3 | L4 | 4M |

UNIT-IV

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|-----|--|-----|----|----|
| 8 a | Evaluate how BigTable handles structured and semi-structured data. | CO4 | L4 | 6M |
| b | Propose optimizations for improving throughput in distributed file systems.. | CO4 | L3 | 4M |

OR

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|-----|---|-----|----|----|
| 9 a | Identify the key characteristics of cloud-native databases. | CO4 | L3 | 5M |
| b | Discuss the limitations of traditional databases in cloud- native environments. | CO4 | L3 | 5M |

UNIT-V

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|------|--|-----|----|----|
| 10 a | Identify and create an explanation of the key factors that influence the availability of services. | CO5 | L3 | 5M |
| b | Illustrate in detail about the availability management on different cloud Services. | CO5 | L4 | 5M |

OR

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|------|--|-----|----|----|
| 11 a | Discuss in detail about Network Level Security, Host Level Security and Application Level Security.S | CO5 | L3 | 5M |
| b | Apply the concept of data security to explain how a cloud provider protects customer data. | CO5 | L5 | 5M |

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