

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

B.Tech. III Year II Semester Regular Examinations April-2026

CLOUD COMPUTING FOR AI

(Common to CSM & CAI)

Time: 3 Hours

Max. Marks: 70

PART-A

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

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|---|---|---|-----|----|----|
| 1 | a | Infer the role of cloud computing. | CO1 | L2 | 2M |
| | b | What are deployment models in cloud computing? | CO1 | L1 | 2M |
| | c | Define elastic computing. | CO2 | L1 | 2M |
| | d | Extend the purpose of data ingestion pipelines? | CO2 | L2 | 2M |
| | e | How is AWS SageMaker useful for ML workflows? | CO3 | L1 | 2M |
| | f | What is experiment tracking in ML? | CO4 | L1 | 2M |
| | g | Define Kubernetes. | CO5 | L1 | 2M |
| | h | What is auto-scaling in cloud environments? | CO5 | L1 | 2M |
| | i | Define security in cloud computing. | CO6 | L2 | 2M |
| | j | What is cost management in cloud AI services? | CO6 | L1 | 2M |

PART-B

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

UNIT-I

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| 2 | | Compare IaaS, PaaS, and SaaS. | CO1 | L2 | 10M |
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| 3 | a | Describe advantages and disadvantages of public and private cloud. | CO1 | L2 | 5M |
| | b | Discuss the benefits of integrating AI with cloud computing. | CO1 | L2 | 5M |

UNIT-II

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| 4 | | Illustrate different types of virtualizations in cloud computing with an example. | CO2 | L2 | 10M |
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| 5 | | Explain cost optimization techniques for cloud storage and compute resources. Give examples from major cloud providers. | CO2 | L2 | 10M |
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UNIT-III

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| 6 | | Examine the benefits and challenges of integrating jupyter with cloud storage for AI development. | CO4 | L4 | 10M |
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| 7 | | Analyze the importance of GPUs and TPUs in cloud environments. | CO4 | L4 | 10M |
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UNIT-IV

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| 8 | a | Discuss the role of Docker in building AI applications. | CO5 | L2 | 6M |
| | b | Explain benefits and challenges of cloud-native AI. | CO5 | L2 | 4M |

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| 9 | | Compare AWS Lambda, Azure Functions with an example. | CO5 | L2 | 10M |
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UNIT-V

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| 10 | | Explain how AI is applied in healthcare cloud solutions. Discuss benefits and challenges. | CO6 | L2 | 10M |
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| 11 | | Discuss real-time analytics in financial cloud services. How does cloud AI improve decision-making. | CO6 | L2 | 10M |
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