MALLA REDDY ENGINEERING COLLEGE FOR WOMEN
(2205PE06) CLOUD COMPUTING
PROFESSIONAL ELECTIVE – III

III Year B.Tech II Sem **L T P C**
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Course Objectives:

- This course provides an insight into cloud computing.
- Topics covered include- distributed system models, different cloud service models, service
- Oriented architectures, cloud programming and software environments, resource management.
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- Topics covered include- distributed system models, different cloud service models, service-oriented architectures, cloud programming and software environments, resource management.

Course Outcomes:

- Demonstrates knowledge of various computing paradigms, including cloud, distributed, and emerging technologies like bio and quantum computing.
- Understands cloud computing fundamentals, including motivation, principles, and key deployment models in modern technology.
- Analyzes cloud architecture, covering infrastructure, application management, and migration processes to develop cloud solutions.
- Analyzes IaaS, PaaS, and SaaS cloud service models, noting their features, applications, and limitations for effective use.
- Compares major cloud providers and their tools, understanding key service offerings in the cloud computing ecosystem.
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UNIT -I

Computing Paradigms: High-Performance Computing, Parallel Computing, Distributed Computing, Cluster Computing, Grid Computing, Cloud Computing, Bio Computing, Mobile Computing, Quantum Computing, Optical Computing, Nano Computing.

UNIT-II

Cloud Computing Fundamentals: Motivation for Cloud Computing, The Need for Cloud Computing, Defining Cloud Computing, Definition of Cloud computing, Cloud Computing Isa Service, Cloud Computing Isa Platform, Principles of Cloud computing, Five Essential Characteristics, Four Cloud Deployment Models

UNIT-III

Cloud Computing Architecture and Management: Cloud architecture, Layer, Anatomy of the Cloud, Network Connectivity in Cloud Computing, Applications, on the Cloud, Managing the Cloud, Managing the Cloud Infrastructure Managing the Cloud application, Migrating Application to Cloud, Phases of Cloud Migration Approaches for Cloud Migration.

UNIT–IV

Cloud Service Models: Infrastructure as a Service, Characteristics of IaaS. Suitability of IaaS, Prosand Conso fIaaS, Summary of IaaS Providers ,Platform as a Service.
Characteristics of PaaS, Suitability of PaaS, Pros and Cons of PaaS, Summary of PaaS Providers, Software as a Service, Characteristics of SaaS, Suitability of SaaS, Pros and Cons of SaaS, Summary of SaaS Providers, Other Cloud Service Models.

UNIT - V

Cloud Service Providers: EMC, EMC IT, Captiva Cloud Toolkit, Google, Cloud Plaform, Cloud Storage, Google Cloud Connect, Google Cloud Print,Google App Engine, Amazon WebServices,AmazonElasticComputeCloud,AmazonSimpleStorageService,Amazon Simple Queue ,service, Microsoft, Windows Azure, Microsoft Assessment and Planning Toolkit, SharePoint, IBM, Cloud Models, IBM Smart Cloud, SAP Labs, SAP HANA Cloud Platform, Virtualization Services Provided by SAP, Salesforce, Sales Cloud, Service Cloud: Knowledge as a Service, Rack space, VMware, Manjrasoft ,Aneka Platform

Textbooks:

1.Essentials of cloud Computing:K.Chandrasekhar,CRCpress,2014

REFERENCEBOOKS:

1. Computing: Principles and Paradigms by Rajkumar Buyya,James Broberg and Andrze jM.Goscinski,Wiley,2011.
2. Distributed and Cloud Computing, Kai Hwang, Geoffery C. Fox, Jack J. Donga Elsevier,2012.
3. Cloud Security and Privacy: An Enterprise Perspective on Risks and Compliance, TimMather, Subra Kumara swamy,ShahedLatif,O'Reilly,SPD,rp2011.