CA5T4E   **CLOUD COMPUTING**   **Credits : 4**

Lecture Hours : 4 periods / week   Internal assessment : 30   Marks

Semester and Examination: 70   Marks

Course Description:

      Cloud computing represents a latest in the long history computing main frame, personal computing networked computing and expected to revolutionize the business is done. This course covers the theoretical aspects of cloud computing. At the end of the course, student will be able to appreciate the cloud computing paradigm, recognize its various forms and able to implement some cloud computing features.

Course Objectives:

• In this course student will investigate cloud computing. He will become familiar with the basics of cloud computing and some of the approaches being applied in the field.
• Student will able to study the cloud computing model of IaaS, PaaS and SaaS.
• Student will perform several exercises using a private cloud and a public cloud.
• Abel to realize and experience programming in a cloud using such paradigms as MapReduce.

UNIT I:

Beyond the Desktop: Introduction to Cloud Computing: Cloud Computing: What It Is-and What It Isn't - From Collaboration to the Cloud: A Short History of Cloud Computing - The Network Is the Computer: How Cloud Computing Works - Companies in the Cloud: Cloud Computing Today - Why Cloud Computing Matters - Are you ready for Computing in the Cloud ?. - The Pros and Cons of Cloud Computing - Who Benefits from Cloud Computing? - Who Shouldn't Be Using Cloud Computing? - Developing Cloud Services: Why Develop Web-Based Applications? - The Pros and Cons of Cloud Service Development - Types of Cloud Service Development - Discovering Cloud Services Development Services and Tools.

UNIT II:

Cloud Computing for the family: Centralizing Email Communications - Collaborating on Schedules,Grocery Lists,To-Do Lists,Household Budgets,Contact Lists,School Projects - Sharing Family Photos - Cloud Computing for the Community: Communicating Across the Community - Collaborating on Schedules - Collaborating on Group Projects and Events - Cloud Computing for the Corporation: Managing Schedules,Contact Lists,Projects - Collaborating on Reports, Marketing Materials, Expense Reports,Budgets,Financial Statements,Presentations.

UNIT III:

Collaborating on Calenders,Schedulers and Task Management:

Exploring Online Calendar Applications,Scheduling Applications, Planning and Task Management - Collaborating on Event Management : Under standing Event Management Applications - Exploring Event Management Applications - Collaborating on Content Management:Understanding Contact Management and CRM - Exploring Contact Management and CRM Applications.

UNIT IV:

Collaborating on Project Management: Understanding Project Management - Exploring Project Management Applications – Collaborating on Word Processing: How Web-Based Word Processing Works -

Exploring Web-Based Word Processors - Collaborating on Spreadsheets: How Web-Based Spreadsheets Work - Exploring Web-Based Spreadsheets - Collaborating on Databases: Understanding Database Management - Exploring Web-Based Databases - Collaborating on Presentations: Preparing Presentations Online - Evaluating Web-Based Presentation Applications.

UNIT V:
Storing and Sharing Files and other online contents: Understanding Cloud Storage - Evaluating Online File-Storage and Sharing Services - Exploring Online Bookmarking Services - Sharing Digital Photographs: Exploring Online Photo- Editing Applications - Exploring Photo-Sharing Communities - Controlling it all.

UNIT VI:
Web Based Desktops: Understanding Web-Based Desktops - Evaluating Web-Based Desktops - Collaborating via web based Communication Tools: Evaluating Web Mail Services - Evaluating Instant Messaging Services - Evaluating Web Conferencing Tools.

UNIT VII:
Infrastructure as a Service (IaaS): Introduction to IaaS, Resource Virtualization- Server, Storage, Network, Case studies. Platform as a Service (PaaS): Introduction to PaaS , Cloud platform & Management – Computation, Storage, Case Studies.

UNIT VIII:
Software as a Service (SaaS): Introduction to SaaS, Web services, Web 2.0, Web OS, Case studies. Cloud issues and challenges: Cloud provider Lock-in, Security

Text Books:
1. Cloud Computing: Web Based Applications that change the way you work and collaborate online, Michael Miller, Pearson Education, 2009.
2. Cloud Application Architectures: Building Applications and Infrastructure in the Cloud (Theory in Practice) By George Reese, O'Reilly, 2009.
3. Algorithms of the intelligent web by H. Marmanis and D. Babenko, Manning Publications; 1/e , 2009.