

## **CAP376:FUNDAMENTALS OF CLOUD COMPUTING**

L:0 T:0 P:5 Credits:3

**Course Outcomes:** Through this course students should be able to

- analyze the trade-offs between deploying applications in the cloud and over the local infrastructure.
- demonstrate applications over commercial cloud computing infrastructures such as Amazon Web Services, Windows Azure, and Google AppEngine.
- evaluate the performance, scalability, and availability of the underlying cloud technologies and software.
- identify security and privacy issues in cloud computing.

### **List of Practicals / Experiments:**

#### **Overview of cloud computing**

- definition of cloud computing
- components of cloud computing
- characteristics of cloud computing
- cloud delivery models
- cloud deployment models
- business models

#### **Cloud service providers**

- basic activities of cloud service providers
- explore the services of amazon web services
- explore the services of microsoft azure
- explore the services of google cloud
- explore the services of zoho.com

#### **Collaboration on documents and forms**

- collaboration using storage and sharing of data
- working of google drive to make spreadsheet
- working with google docs
- working with google forms

#### **Collaboration on schedules and tasks**

- schedule management
- task management

#### **Collaboration on project management**

- working on online project management tools

#### **Collaboration on communication**

- working on web-based communication tools

#### **Virtualization**

- introduction to the vmware hands on lab platform
- creation of virtual machine
- updating hardware version of the virtual machine
- updating virtual memory of the virtual machine
- restrict the number of users accessing the virtual machine
- creation of content library

- creation of template, clones and snapshots of a virtual machine
- migrating a virtual machine
- migrating virtual machine data

**Cloud security**

- open authorization
- open id using single sign-on
- SSL and TLS

**Text Books:**

1. CLOUD COMPUTING CONCEPTS, TECHNOLOGY & ARCHITECTURE by THOMAS ERL, Pearson Education India

**References:**

1. CLOUD COMPUTING BLACK BOOK by KAILASH JAYASWAL, JAGANNATH KALLAKURCHI, DONALD J. HOUE, DR. DEVEN SHAH, DREAMTECH PRESS