	J.S. University, Shikohabad Faculty of Information Technology	Value Added Course
		AY: 2020-21

CLOUD COMPUTING

Learning Outcome:

This Course will provide knowledge of Information Technology

Duration: 30 Hours. (Theory and Practical)

Course Outcomes:
- Understand the fundamental principles of distributed computing.
- Understand how the distributed computing environments known as Grids can be built from lower level services.
- Understand the importance of virtualization in distributed computing and how this has enabled the development of Cloud Computing.
- Analyze the performance of Cloud Computing.
- Understand the concept of Cloud Security.
- Learn the Concept of Cloud Infrastructure Model.

MODULE I

8-hrs

CLOUD COMPUTING FUNDAMENTALS
Cloud Computing definition, private, public and hybrid cloud. Cloud types; IaaS, PaaS, SaaS. Benefits and challenges of cloud computing, public vs private clouds, role of virtualization in enabling the cloud; Business Agility: Benefits and challenges to . Cloud architecture, Application availability, performance, security and disaster recovery; next generation Cloud Applications.

MODULE II
CLOUD APPLICATIONS
6-hrs
Technologies and the processes required when deploying web services; Deploying a web service from inside and outside a cloud architecture, advantages and disadvantages.

MODULE III

MANAGEMENT OF CLOUD SERVICES
8-hrs

Reliability, availability and security cif services deployed from the cloud.
Performance and scalability of services, tools and technologies used to manage
cloud services deployment; Cloud Economics : Cloud Computing infrastructures
available for implementing cloud based services. Economics of choosing a Cloud
platform for an organization, based on application requirements, economic
constraints and business needs (e.g Amazon, Microsoft and Google, Salesforce.corn,
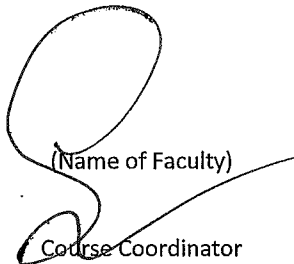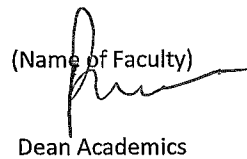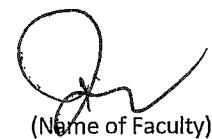Ubuntu and Redhat)

MODULE IV

8 Hrs.

Introduction to VMWare Simulator Basics of VMWare, advantages of VMware virtualization,
using Vmware workstation, creating virtual machines-understanding virtual machines, create a
new virtual machine on local host, cloning virtual machines, virtualize a physical machine, starting
and stopping a virtual machine.

REFERENCES

1. Gautam Shroff, "Enterprise Cloud Computing Technology Architecture
Applications", Cambridge University Press; 1 edition, [ISBN: 978 -0521137355],2010.
2. Toby Velte, Anthony Velte, Robert Elsenpeter, "Cloud Computing, A, Practical
Approach" McGraw-Hill Osborne Media; 1 edition [ISBN: 0071626948], 2009.
3. Dimitris N. Chorafas, "Cloud Computing Strategies" CRC Press; 1 edition
[ISBN:1439834539],2010.

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