UCCSS20 CLOUD COMPUTING

Year: III	Course Code: UCCSS20	Title of the Course: Cloud Computing	Course Type: Theory	Course Category: Core	H/W 5	Credits 4	Marks 40+60
Sem: VI							

Course Learning Objectives (CLO)
1. Discuss the fundamental concepts in cloud computing technologies.
2. Understand the various technologies.
3. Explain the architecture and concept of different cloud model IaaS, PaaS, SaaS
4. Analyze the fundamental and Cloud Deployment Models Course Outcomes.
5. Understand the concepts of Challenges in Cloud security.

Course Outcomes (COs)

The Learners will be able to
1. Understand the fundamental concepts in cloud computing technologies.
2. Analyze and integrate the cloud enabling services.
3. Analyze the architecture and concept of different cloud model IaaS, PaaS, SaaS.
4. Understand and familiar with the deployment models.
5. Comprehend the Cloud Data Security concepts and how they are addressed with the security mechanisms.

CO	PSO					
	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO1	M	H	M	M	M	H
CO2	M	M	H	L	M	L
CO3	M	L	M	L	L	H
CO4	L	M	M	M	L	M
CO5	L	M	L	H	L	L

(Low -L, Medium -M, High-H)

CO	PO					
	1	**2**	**3**	**4**	**5**	**6**
CO1	H	M	H	M	M	H
CO2	M	H	H	H	H	M
CO3	L	H	M	H	H	M
CO4	H	L	L	M	L	L
CO5	M	H	H	H	H	L

(Low -L, Medium -M, High-H)

Course Syllabus

Unit I   **(Hour15)**

1.1 Introduction to Cloud Computing: Cloud Computing in Nutt shell. (K2, K4)

1.2 Roots of Cloud Computing- Types of Clouds. (K4, K6)

1.3 Features of a Cloud. (K5)

1.4 Cloud Infrastructure Management. (K4, K6)

1.5 Challenges and Risks. (K4, K6)

1.6 Migrating in to a Cloud. (K4)

Unit II   **(Hour 15)**

2.1 Integration as a Service-Introduction. (K2)

2.2 Onset of Knowledge Era- Evolution of SaaS. (K4, K5)

2.3 Challenges. (K4, K5)

2.4 Approaching the SaaS Integration- New Integration Scenarios. (K4)

2.5 Integration Methodologies-SaaS Integration Services. (K4, K5)

2.6 B2B Services. (K4, K6)

Unit III   **(Hour 15)**

3.1 Cloud Service Model Infrastructure as a Service (IaaS): Introduction to IaaS, Resource Virtualization. (K2, K4)

3.2 Server, Storage, Network. (K2, K4)

3.3 Case studies. (K4, K5, K6)

3.4 Platform as a Service (PaaS): Introduction to PaaS. (K2, K4)

3.5 Cloud platform and Management, Computation, (K3, K4)

3.6 Storage. (K5)

Unit IV   **(Hour 15)**

4.1 Cloud Deployment Model Introduction. (K2)

4.2 Public Deployment Model. (K2, K4, K5)

4.3 Private Deployment Model. (K2, K4, K5)

4.4 Virtual Private Deployment Model. (K4, K5)

4.5 Hybrid Deployment Model. (K4, K5)

4.6 Community Deployment Model. (K4, K5)

Unit V   **(Hour 15)**

5.1 Cloud Challenge. (K2, K4)

5.2 Organizational Readiness. (K2, K4)

5.3 Change management in cloud. (K2, K4)

5.4 Data Security in the Cloud. (K4, K5)

5.5 Legal Issues in Cloud Computing. (K4)

5.6 Production - Readiness for Cloud Services. (K4, K5)

Text Book

1. Rajkumar Buyya, James Broberg and AndrzejM.goscinski, "Cloud Computing: Principles and Paradigms", John Wiley & Sons, 2010.

Reference Books

1. Antony T.Ve1te, Toby J.Velte, Robert Elsen Peter, "Cloud Computing: A Practical Approach", Tata McGraw- Hill Pub, 2010.

2. Haley beard, "Cloud Computing best practices for managing and measuring processes for on-demand computing, applications and Data centers in the cloud with SLAs", Emereo Pvt.Limited,2009.

Open Educational Resources (OER)

1. http://www.mb.net/resources/cloud-computing- resources.aspx.

2. http://www.mastertheboss.com/cloud-computing/in-the-cloud-computing-a- beginners-tutorial.

3. http//www.tutorialspoint.com/cloud_computing/cloud_computing_tutorial.pdf.