

### Cloud Computing (Elective-V)

**Subject : Cloud Computing (Elective-V) Code : BIT460**  
**Academic Year : 2018-2019 Year- Semester: B.E IV/IV II Sem.**

Unit	Topic
1	<b>The Evolution of Cloud Computing:</b> Hardware Evolution. Internet Software Evolution. Establishing a Common Protocol for the Internet. Evolution of Ipv6. Finding a Common Method to Communicate Using the Internet Protocol. Building a Common Interface to the Internet.
	<b>Cloud Formations:</b> From One Computer to a Grid of Many. Server Virtualization. Parallel Processing. Vector Processing. Symmetric Multiprocessing Systems. Massively Parallel Processing Systems
2	<b>Web Services and the Cloud:</b> Communication-as-a-Service (CAAS). Infrastructure-as-a-Service (IAAS). Monitoring-as-a-Service (MAAS). Platform-as-a-Service (PAAS). Software-NIS- a-Service (SAAS)
	<b>Building Cloud Networks:</b> The Evolution from the MSP Model to Cloud. Computing and Software- as-a-Service. The Cloud Data Center .Collaboration i. Service-Oriented Architectures as a Step Toward Cloud Computing. Basic Approach to a Data Center-Based SOA The Role of Open Source Software in Data Centers. Where Open Source Software Is Used
	<b>Case studies:</b> Amazon web services. Google App Engine
3	<b>Virtualization:</b> Introduction. Types and Technologies. Accomplishing virtualization. Importance of virtualization in Cloud computing.
	<b>Case studies:</b> Xen Virtual machine monitors- Xen API. VMware - VMware products - VMware Features. Microsoft Virtual Server - Features of Microsoft Virtual Server
4	<b>Federation in the Cloud,</b> Presence in the Cloud I Privacy and Its Relation to Cloud-Based Information System.
	<b>Cloud Security Challenges:</b> Software-as-a-Service Security Security-as-aService -the New MSSP.
5	<b>Common Standards in Cloud Computing:</b> The Open Cloud Consortium, The Distributed Management Task Force, Standards for Application Developers I Standards for Messaging .Internet Messaging Access Protocol (IMAP) Standards for Security . Examples of End-User Access to Cloud Computing
	<b>Mobile Internet Devices and the Cloud:</b> Mobile Operating Systems for Smart phones Mobile Platform Virtualization I Collaboration Applications for Mobile Platforms
Total	

#### Suggested Reading

1. John W. Rittinghouse, "Cloud Computing: Implementation, Management, and Security ",. James F. Ransome, CRC Press 2009.
2. Virtualization Specialist level complete certification kit - Study guide from [www. theartof service.erg](http://www.theartofservice.org)
3. William von Hagen, "Professional Xen Virtualization", Wrox Publications, January, 2008.
4. Chris Wolf, Erick M. Halter, "virtualization: From the Desktop to the Enterprise", APRESS 2005.
5. David Marshall, Wade A. Reynolds, "Advanced Server Virtualization: VMware and Microsoft Platform in the Virtual Data Center", Auerbach Publications, 2006.

#### Web Resources

1. <http://aws.amazon.com>
2. <http://code.google.com/appsengine>