OIT552 CLOUD COMPUTING

DETAILED SYLLABUS

OBJECTIVES:

• To learn about the concept of cloud and utility computing.

• To have knowledge on the various issues in cloud computing.

• To be familiar with the lead players in cloud.

• To appreciate the emergence of cloud as the next generation computing paradigm.

UNIT I INTRODUCTION TO CLOUD COMPUTING

Introduction to Cloud Computing – Roots of Cloud Computing – Desired Features of Cloud Computing – Challenges and Risks – Benefits and Disadvantages of Cloud Computing.

UNIT II VIRTUALIZATION

Introduction to Virtualization Technology – Load Balancing and Virtualization – Understanding Hypervisor – Seven Layers of Virtualization – Types of Virtualization – Server, Desktop, Application Virtualization.

UNIT III CLOUD ARCHITECTURE, SERVICES AND STORAGE

NIST Cloud Computing Reference Architecture – Public, Private and Hybrid Clouds - IaaS – PaaS – SaaS – Architectural Design Challenges – Cloud Storage.

UNIT IV RESOURCE MANAGEMENT AND SECURITY IN CLOUD

Inter Cloud Resource Management – Resource Provisioning Methods – Security Overview – Cloud Security Challenges – Data Security –Application Security – Virtual Machine Security.

UNIT V CASE STUDIES

Google App Engine (GAE) – GAE Architecture – Functional Modules of GAE – Amazon Web Services (AWS) – GAE Applications – Cloud Software Environments – Eucalyptus – Open Nebula – Open Stack.

OUTCOMES:

On Completion of the course, the students should be able to:

SSLC, HSE, DIPLOMA, B.E/B.TECH, M.E/M.TECH, MBA, MCA

Notes   *Available @*
Syllabus
Question Papers   www.Binils.com
Results and Many more…

• Articulate the main concepts, key technologies, strengths and limitations of cloud computing.

• Learn the key and enabling technologies that help in the development of cloud.

• Develop the ability to understand and use the architecture of compute and storage cloud, service and delivery models.

• Explain the core issues of cloud computing such as resource management and security.

• Be able to install and use current cloud technologies.

• Choose the appropriate technologies, algorithms and approaches for implementation and use of cloud.

TEXT BOOKS:

1. Buyya R., Broberg J., Goscinski A., "Cloud Computing: Principles and Paradigm", First Edition, John Wiley & Sons, 2011.

2. Kai Hwang, Geoffrey C. Fox, Jack G. Dongarra, "Distributed and Cloud Computing, From Parallel Processing to the Internet of Things", Morgan Kaufmann Publishers, 2012.

3. Rittinghouse, John W., and James F. Ransome, "Cloud Computing: Implementation, Management, And Security", CRC Press, 2017.

REFERENCES:

1. Rajkumar Buyya, Christian Vecchiola, S. ThamaraiSelvi, "Mastering Cloud Computing", Tata Mcgraw Hill, 2013.

2. Toby Velte, Anthony Velte, Robert Elsenpeter, "Cloud Computing - A Practical Approach", Tata Mcgraw Hill, 2009.

3. George Reese, "Cloud Application Architectures: Building Applications and Infrastructure in the Cloud: Transactional Systems for EC2 and Beyond (Theory in Practice)", O'Reilly, 2009.