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| **SSN College of Engineering**  **Department of Computer Science and Engineering** |
| **LESSON PLAN** |
| Sub Code & Name: **CS6703 – GRID AND CLOUD COMPUTING**  **Batch/Academic Year:2014-18/17-18 Branch: CSE Semester: VII**  Teaching Methodology and aids: PowerPoint presentations\Projector\Use of ICT\Chalk and Blackboard |

**Unit I:**

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| **S. No** | **Unit No** | **Topics to be covered** | **Hours** | | **Remarks** |
| **Plan** | **Actual** |
| 1 | I  [9 Hrs]  Introduction to Grid & Cloud | Scalable computing over the Internet | 1 |  |  |
| 2 | Network Technologies | 1 |  |  |
| 3 | Grid Computing – Introduction | 2 |  |  |
| 4 | Cloud Computing – Introduction | 2 |  |  |
| 5 | Service Oriented Architecture | 1 |  |  |
| 6 | Grid Computing – Architecture | 2 |  |  |
| 7 | Standards and Elements of Grid Computing | 1 |  |  |
|  | **Planned Hours** | | **10** |  |  |

**Unit II:**

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| --- | --- | --- | --- | --- | --- |
| **S. No** | **Unit No** | **Topics to be covered** | **Hours** | | **Remarks** |
| **Plan** | **Actual** |
| 1 | II [9 Hrs]  GRID SERVICES | Grid Services – Introduction | 2 |  |  |
| 2 | Open Grid Services Architecture (OGSA) | 2 |  |  |
| 3 | Requirements of OGSA – Functional | 1 |  |  |
| 4 | Open Grid Services Infrastructure (OGSI) | 2 |  |  |
| 5 | Grid Service Models | 1 |  |  |
| 6 | Services of OGSA | 2 |  |  |
|  | **Planned Hours** | | 10 |  |  |

**Unit III:**

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| --- | --- | --- | --- | --- | --- |
| **S.No** | **Unit No** | **Topics to be covered** | **Hours** | | **Remarks** |
| **Plan** | **Actual** |
| 1 | III [9 Hrs]  Virtualization | Cloud Deployment Models | 2 |  |  |
| 2 | Categories of Cloud Computing | 1 |  |  |
| 4 | Virtualization - Introduction | 2 |  |  |
| 5 | Levels of Virtualization | 1 |  |  |
| 6 | Virtualization – CPU, Memory, I/O | 2 |  |  |
| 7 | Virtual Clusters | 1 |  |  |
| 8 | Resources – Virtualization | 1 |  |  |
|  | **Planned Hours** | | 10 |  |  |

**Unit IV:**

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| --- | --- | --- | --- | --- | --- |
| **S.**  **No.** | **Unit No** | **Topics to be covered** | **Hours** | | **Remarks** |
| **Plan** | **Actual** |
| 1 | IV [9 Hrs]  Programming Model for Grid & Cloud | Globus Toolkit (GT4) | 2 |  |  |
| 2 | Globus Programming Model | 2 |  |  |
| 3 | Hadoop – Introduction | 2 |  |  |
| 4 | Programming Hadoop – MapReduce | 2 |  |  |
| 5 | HDFS | 2 |  |  |
| **Planned Hours** | | | 10 |  |  |

**Unit V:**

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| --- | --- | --- | --- | --- | --- |
| **S.**  **No.** | **Unit No** | **Topics to be covered** | **Hours** | | **Remarks** |
| **Plan** | **Actual** |  |
| 1 | V [9 Hrs]  Security in Grid and Cloud | Grid Computing – Security | 1 |  |  |
| 2 | Grid Security Infrastructure (GSI) | 2 |  |  |
| 3 | Cloud Computing – Security | 1 |  |  |
| 4 | Cloud Computing – Data Security | 2 |  |  |
| 5 | Identity & Access Management in Cloud Computing | 2 |  |  |
| 6 | Issues in Cloud Computing Security | 2 |  |  |
| **Planned Hours** | | | 10 |  |  |

**Prepared By Verified By Approved By**

**K. Vallidevi Y. V. Lokeswari PAC Member HOD / CSE**