**LESSON PLAN**

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| **Discipline:**  Computer Sc. & Engg. | **Semester:**  Sixth (6th ) | **Name Of The Faculty:**  Er Pramod Kumar Sahu |
| **Subject:**  Cloud Computing Th-3 | **No of days/ week class allotted:** Six(6) | **Semester from date: 16.01.24 to Date: 26.04.24**  **No of weeks: 15** |
| **WEEK** | **CLASS DAY** | **THEORY TOPICS** |
| 1st | 1st | **Chapter No.-01(Introduction to Cloud Computing)**  Historical development  Vision of Cloud Computing |
| 2nd | Characteristics of Cloud computing |
| 3rd | Cloud computing Reference model |
| 4th | Cloud computing environment  Cloud Service requirements |
| 5th | Cloud and Dynamic Infrastructure Cloud Adoption  Cloud application |
| 6th | ***Review Class*** |
| 2nd | 1st | **Chapter No.- 02 (Cloud Computing Architecture)** Introduction |
| 2nd | Cloud Reference Model |
| 3rd | Continue |
| 4th | Types of Clouds |
| 5th | Cloud Interoperability and standards |
| 6th | Cloud computing Interoperability use cases |
| 3rd | 1st | Role of standards in Cloud Computing environment |
| 2nd | Continue |
| 3rd | ***Review Class*** |
| 4th | **Chapter No.- 03 (Scalability and Fault Tolerance)**  Introduction  Scalability and Fault Tolerance |
| 5th | Cloud solutions |
| 6th | Cloud Ecosystem  Cloud Business process management |
| 4th | 1st | Portability and Interoperability |
| 2nd | Cloud Service management Cloud Offerings |
| 3rd | Testing under Control |
| 4th | Cloud service Controls |
| 5th | Virtual desktop Infrastructure |
| 6th | ***Monthly test-01*** |
| 5th | 1st | ***Review Class*** |
| 2nd | **Chapter No.- 04 (Cloud Management and Virtualisation Technology)**  Create a virtualized Architecture Data Centre |
| 3rd | Resilience,Agility |
| 4th | Cisco Data Centre Network architecture |
| 5th | Storage Provisioning |
| 6th | Asset Management |
| 6th | 1st | Concept of Map Reduce Cloud Governance |
| 2nd | Load Balancing |
| 3rd | High Availability Disaster Recovery |
| 4th | ***Review Class*** |
| 5th | **Chapter No.- 05 (Virtualisation)**  Virtualization |
| 6th | Network Virtualization |
| 7th | 1st | ***Monthly test-02*** |
| 2nd | Desktop and Application Virtualization |
| 3rd | Desktop as a service Local desktop Virtualization |
| 4th | Virtualization benefits Server Virtualization |
| 5th | Block and File level Storage Virtualization |
| 6th | Virtual Machine Monitor |
| 8th | 1st | Infrastructure Requirements VLAN and VSAN |
| 2nd | ***Review Class*** |
| 3rd | **Chapter No.- 06 (Cloud Security)**  Cloud Security Fundamentals |
| **4th** | **Cloud security services** |
| 5th | Continue |
| 6th | Design Principles |
| 9th | 1st | Secure Cloud software requirements |
| 2nd | Continue |
| 3rd | Policy Implementation |
| 4th | Cloud Computing Security Challenges |
| 5th | ***Review Class*** |
| 6th | ***Monthly test-03*** |
| 10th | 1st | **Chapter No.- 07(Cloud Computing Security Architecture)**  Architectural Considerations Information classification |
| 2nd | Virtual Private Networks |
| 3rd | Public Key and Encryption Key management  Digital certificates |
| 4th | Key management Memory Cards |
| 5th | Implementing Identity Management  Controls and Autonomic System |
| 6th | ***Review Class*** |
| 11th | 1st | ***Monthly test-04*** |
| 2nd | **Chapter No.- 08 (Market Based Management of Clouds)**  Cloud Information security vendors |
| 3rd | Cloud Federation, characterization |
| 4th | Cloud Federation stack |
| 5th | Third Party Cloud service |
| 6th | Case study |
| 12th | 1st | ***Review Class*** |
| 2nd | **Chapter No.- 09 (Hadoop)**  Introduction |
| 3rd | Data Source |
| 4th | Data storage and |
| 5th | Data Analysis |
| 6th | Comparison with other system |
| 13th | 1st | ***Review Class*** |
| 2nd | Previous year question and answer discussion |
| 3rd | Previous year question and answer discussion |
| 4th | Previous year question and answer discussion |
| 5th | Previous year question and answer discussion |
| 6th | Previous year question and answer discussion |
| 14th | 1st | Previous year question and answer discussion |
| 2nd | Previous year question and answer discussion |
| 3rd | Previous year question and answer discussion |
| 4th | Previous year question and answer discussion |
| 5th | Previous year question and answer discussion |
| 6th | Previous year question and answer discussion |
| 15th | 1st | Previous year question and answer discussion |
| 2nd | Previous year question and answer discussion |
| 3rd | Previous year question and answer discussion |
| 4th | Previous year question and answer discussion |
| 5th | Previous year question and answer discussion |
| 6th | Previous year question and answer discussion |

*Chapters covered up to IA****: 1, 2 & 3.***