KIIT POLYTECHNIC, BHUBANESWAR

LESSON PLAN

Session (2022-2023)

Discipline: Computer Science & Engineering	**Semester: 6th, Summer/2023**	**Name of the Teaching Faculty:** **Mr. Amalendu Kumar Pradhan, Lecturer** **Email ID: amalendufcs@kp.kiit.ac.in**
Subject: Cloud Computing **Theory-** 03	**No. Of Days / Week :04**	**Start Date:** 13/02/2023 **End Date:** 23/05/2023

Week	Class Day	Theory Topics
1st	**1st**	**Unit-1: Introduction to Cloud Computing** Historical development
	2nd	Vision of Cloud Computing
	3rd	Characteristics of Cloud computing
	4th	Characteristics of Cloud computing
2nd	**1st**	**Unit-2: Cloud Computing Architecture** Introduction Cloud Reference Model
	2nd	Types of Clouds
	3rd	Cloud Interoperability and standards Cloud computing Interoperability use cases
	4th	Role of standards in Cloud Computing environment
3rd	**1st**	**Unit -3: Scalability and Fault Tolerance** Introduction Scalability and Fault Tolerance Cloud solutions Cloud Ecosystem
	2nd	Cloud Business process management Portability and Interoperability Cloud Service management
	3rd	Testing under Control Cloud Offerings
	4th	Cloud service Controls Virtual desktop Infrastructure

4th	**1st**	**Unit-4: Cloud Management and Virtualization Technology** Create a virtualized Architecture. Data Centre Resilience Agility
	2nd	Cisco Data Centre Network architecture
	3rd	Storage Provisioning Asset Management Concept of Map Reduce Cloud Governance
	4th	Load Balancing High Availability Disaster Recovery
5th	**1st**	**Unit – 5: Virtualization** Virtualization Virtualisation benefits
	2nd	Desktop and Application Virtualisation Network Virtualisation
	3rd	Local desktop Virtualisation Desktop as a service
	4th	**QUIZ TEST**
6th	**1st**	Server Virtualisation
	2nd	Block and File level Storage Virtualisation
	3rd	Virtual Machine Monitor
	4th	Infrastructure Requirements
7th	**1st**	VLAN and VSAN
	2nd	**Unit- 6: Cloud Security** Cloud Security Fundamentals
	3rd	Cloud security services
	4th	Cloud security services
8th	**1st**	Design Principles
	2nd	Secure Cloud software requirements
	3rd	Policy Implementation
	4th	Cloud Computing Security Challenges
9th	**1st**	**Unit- 7: Cloud Computing Security Architecture**
	2nd	Architectural Considerations
	3rd	Information Classification
	4th	Virtual Private Networks

10th	**1st**	Public Key and Encryption Key management
	2nd	Digital certificates
	3rd	Key management
	4th	Memory Cards
11th	**1st**	Implementing Identity Management
	2nd	Controls and Autonomic System
	3rd	**Unit- 8: Market Based Management of Clouds**
	4th	Cloud Information security vendors
12th	**1st**	Cloud Federation, characterization
	2nd	Cloud Federation stack
	3rd	Third Party Cloud service
	4th	Case study
13th	**1st**	**Unit-9: Hadoop**
	2nd	Introduction
	3rd	Data Source
	4th	Data storage and Analysis
14th	**1st**	Comparison with other system
	2nd	**Quiz Test**
	3rd	**Revision**
	4th	**Revision**
15th	**1st**	**Discussion of Question Answer**
	2nd	**Discussion of Question Answer**
	3rd	**Discussion of Question Answer**
	4th	**Discussion of Question Answer**