LESSON PLAN

Department: CSE		Semester:6th, Name of Faculty: MISS KHIPTITA MUKHI	
Subject: CLOUD COMPUTING (CC) (Th-3)	No. Of days/ week Class allotted: 4	Effective From Date: 22.12.2025 to 18.04.2026	
		No. Of Week-15	
		Topic to be Covered:	
Week	Class Day	Theory	
1st	1st	**UNIT 1: Introduction To Cloud Computing** 1.1 Historical development	
	2nd	1.2 Vision of Cloud Computing 1.3 Characteristics of Cloud computing	
	3rd	1.4 Cloud computing Reference model 1.5 Cloud computing environment	
	4th	1.6 Cloud Service requirements 1.7 Cloud and Dynamic Infrastructure	
2nd	1st	1.8 Cloud Adoption 1.9 Cloud applications	
	2nd	**UNIT 2: Cloud Computing Architecture** 2.1. Introduction	
	3rd	2.2. Cloud Reference Model	
	4th	2.2. Cloud Reference Model	
3rd	1st	2.3. Types of Clouds	
	2nd	2.3. Types of Clouds	
	3rd	2.4. Cloud Interoperability and standards	
	4th	2.5. Cloud computing Interoperability use cases	
4th	1st	2.6. Role of standards in Cloud Computing environment	
	2nd	**UNIT 3: Scalability and Fault Tolerance** 3.1. Introduction	
	3rd	3.2. Scalability and Fault Tolerance	
	4th	3.3. Cloud solutions 3.4. Cloud Ecosystem	
5th	1st	3.5. Cloud Business process management 3.6. Portability and Interoperability	
	2nd	3.7. Cloud Service management 3.8. Cloud Offerings	
	3rd	3.9. Testing under Control	
	4th	3.10. Cloud service Controls	
6th	1st	3.11. Virtual desktop Infrastructure	
	2nd	**UNIT 4: Cloud Management and Virtualisation Technology** 4.1. Create a virtualised Architecture	

		3rd	4.2. Data Centre
		4th	4.3. Resilience
			4.4. Agility
7th		1st	4.5. Cisco Data Centre Network architecture
		2nd	4.6. Storage
			4.7. Provisioning
		3rd	4.8. Asset Management
			4.9. Concept of Map Reduce
		4th	4.10. Cloud Governance
			4.11. Load Balancing
8th		1st	4.12. High Availability
			4.13. Disaster Recovery
		2nd	**UNIT 5: Virtualisation**
			5.1. Virtualisation
		3rd	5.2. Betwork Virtualisation
			5.3. Desktop and Application Virtualisation
		4th	5.4. Desktop as a service
			5.5. Local desktop Virtualisation
9th		1st	5.6. Virtualisation benefits
			5.7. Server Virtualisation
		2nd	5.8. Block and File level Storage Virtualisation
			5.9. Virtual Machine Monitor
		3rd	5.10. Infrastructure Requirements
		4th	5.11. VLAN and VSAN
10th		1st	**1. Doubt Clearing class**
			2. Quiz test
			3. Assignment
		2nd	**UNIT 6: Cloud Security**
			6.1. Cloud Security Fundamentals
		3rd	6.2. Cloud security services
		4th	6.2. Cloud security services
11th		1st	6.3. Design Principles
		2nd	6.4. Secure Cloud software requirements
		3rd	6.5. Policy Implementation
		4th	6.6. Cloud Computing Security Challenges
12th		1st	6.6. Cloud Computing Security Challenges
		2nd	**UNIT 7: Cloud Computing Security Architecture**
			7.1. Architectural Considerations
		3rd	7.2. Information Classification
			7.3. Virtual Private Networks
		4th	7.4. Public Key and Encryption Key management
			7.5. Digital certificates
13th		1st	7.6. Key management
			7.7. Memory Cards

	2nd	7.8. Implementing Identity Management 7.9. Controls and Autonomic System
	3rd	**UNIT 8: Market Based Management of Clouds** 8.1. Cloud Information security vendors
	4th	8.2. Cloud Federation, characterization
14th	1st	8.3. Cloud Federation stack
	2nd	8.4. Third Party Cloud service
	3rd	8.5. Case study
	4th	**UNIT 9: Hadoop** 9.1. Introduction
15th	1st	9.2. Data Source
	2nd	9.3. Data storage and Analysis
	3rd	9.4. Comparison with other system
	4th	**1. Doubt Clearing class** **2. Quiz test** **3. Assignment**

Khiptita Mukhi

Signature of Faculty

Rasmita Patra

HOD z/c 22/12/25

Dept. of CSE
Govt. Polytechnic,
Kandhamal