LESSON PLAN

Subject: Cloud Computing   **Subject code: PE-IT-A404A**

Session: 2022-23   **Semester: VIII**

SNo	Topic	No. of Lectures required	CO Covered	Teaching Methodology
1	UNIT-1: Overview of Computing Paradigm	1		Chalk & Talk
2	Recent trends in Computing	1		PPT
3	Grid Computing	1		PPT
4	Cluster Computing	1		PPT
5	Distributed Computing	1		PPT
6	Utility Computing	1		PPT
7	Cloud Computing	1		PPT
8	Evolution of cloud computing	1		Chalk & Talk
9	Business driver for adopting cloud computing.	1	CO1	PPT
10	Cloud Computing (NIST Model)	1		PPT
11	History of Cloud Computing	2		PPT
12	Cloud service providers	1		PPT
13	Properties,Characteristics& Disadvantages,	1		PPT
14	Pros and Cons of Cloud Computing, Benefits of Cloud Computing,	1		Chalk & Talk
15	Cloud computing vs. Cluster computing vs. Grid computing, Role of Open Standards.	1		Video
16	**UNIT-2**: Cloud Computing Architecture	1		PPT
17	Cloud computing stack	1		PPT
18	Comparison with traditional computing architecture (client/server)	1		PPT
19	Services provided at various levels	1		Video
20	How Cloud Computing Works	1		PPT
21	Role of Networks in Cloud computing, protocols used	1	CO2	PPT
22	Role of Web services	1		PPT
23	Service Models (XaaS) -Infrastructure as a Service (IaaS), Platform as a Service (PaaS), Software as a Service (SaaS)	1		PPT
24	Deployment Models-Public cloud, Private cloud, Hybrid cloud, Community cloud.	1		PPT
25	**UNIT-3**: Service Management in Cloud Computing	1		PPT
26	Service Level Agreements (SLAs), Billing & Accounting	1	CO3	PPT
27	Comparing Scaling Hardware: Traditional vs. Cloud	1		PPT/ Video

28	Economics of scaling: Benefitting enormously	1		PPT
29	Managing Data-Looking at Data	1		PPT
30	Scalability & Cloud Services	1		PPT
31	Database & Data Stores in Cloud,Large Scale Data Processing.	1		PPT
32	Case study: Eucalyptus, Microsoft Azure, Amazon EC2.	1		Case Study
33	**UNIT -4**: Cloud Security	1		PPT
34	Infrastructure Security, Network level security	1		PPT
35	Host level security, Application level security	1		PPT
36	Data security and Storage, Data privacy and security Issues	1		Chalk & Talk
37	Jurisdictional issues raised by Data location, Identity & Access Management	1	CO4	PPT
38	Access Control, Trust, Reputation	1		PPT
39	Risk, Authentication in cloud computing	1		PPT
40	Client access in cloud, Cloud contracting Model, Commercial and business considerations.	1		PPT/ Video