



# VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN

[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



Course Code / Name : U14CS736 / Cloud Computing

Class : (IV /B.E / CSE /A&B)

### LESSON PLAN

| UNIT -1 (CLOUD ARCHITECTURE AND MODEL) |   |                     |              |               |
|--|---|---------------------|--------------|---------------|
| Session No                             | Topic   | Duration in Minutes | Teaching Aid | Book Referred |
| 1                                      | Technologies for Network-Based System             | 45                  | PPT          | R1            |
| 2                                      | System Models for Distributed and Cloud Computing | 45                  | PPT          | R1            |
| 3                                      | NIST Cloud Computing Reference Architecture       | 45                  | PPT          | R1            |
| 4                                      | Cloud Models                                      | 45                  | PPT          | R1            |
| 5                                      | Characteristics & Cloud Services                  | 45                  | PPT          | R1            |
| 6                                      | Cloud models (IaaS, PaaS, SaaS)                   | 45                  | PPT          | R1            |
| 7                                      | Public vs Private Cloud                           | 45                  | PPT          | R2            |
| 8                                      | Cloud Solutions - Cloud ecosystem                 | 45                  | PPT          | R2            |
| 9                                      | Service management – Computing on demand          | 45                  | PPT          | R2            |
| UNIT -2 (VIRTUALIZATION)               |   |                     |              |               |
| 10                                     | Basics of Virtualization                          | 45                  | PPT          | R1,R2         |
| 11                                     | Types of Virtualization                           | 45                  | PPT          | R1,R2         |
| 12                                     | Implementation Levels of Virtualization           | 45                  | PPT          | R1,R2         |
| 13                                     | Virtualization Structures                         | 45                  | PPT          | R1,R2         |
| 14                                     | Tools and Mechanisms                              | 45                  | PPT          | R1,R2         |
| 15                                     | Virtualization of CPU                             | 45                  | PPT          | R1,R2         |
| 16                                     | Memory, I/O Devices                               | 45                  | PPT          | R1,R2         |
| 17                                     | Virtual Clusters and Resource management          | 45                  | PPT          | R1,R2         |
| 18                                     | Virtualization for Data-center Automation         | 45                  | PPT          | R1,R2         |
| UNIT -3 (CLOUD INFRASTRUCTURE)         |   |                     |              |               |
| 19                                     | Architectural Design of Compute                   | 45                  | PPT          | R1,R2         |
| 20                                     | Architectural Design of Storage Clouds            | 45                  | PPT          | R1,R2         |
| 21                                     | Layered Cloud Architecture Development            | 45                  | PPT          | R1,R2         |
| 22                                     | Design Challenges                                 | 45                  | PPT          | R1,R2         |
| 23                                     | Inter Cloud Resource Management                   | 45                  | PPT          | R1,R2         |
| 24                                     | Resource Provisioning                             | 45                  | PPT          | R1,R2         |
| 25                                     | Platform Deployment                               | 45                  | PPT          | R1,R2         |
| 26                                     | Cloud Resources                                   | 45                  | PPT          | R1,R2         |
| 27                                     | Global Exchange of Cloud Resources                | 45                  | PPT          | R1,R2         |
| UNIT -4 (PROGRAMMING MODEL)            |   |                     |              |               |
| 28                                     | Parallel and Distributed Programming Paradigms    | 45                  | PPT          | R1            |
| 29                                     | MapReduce   | 45                  | PPT          | R1            |
| 30                                     | Twister and Iterative MapReduce                   | 45                  | PPT          | R1            |
| 31                                     | Hadoop Library from Apache                        | 45                  | PPT          | R1            |
| 32                                     | Mapping Applications                              | 45                  | PPT          | R1            |
| 33                                     | Programming Support                               | 45                  | PPT          | R1            |
| 34                                     | Google App Engine                                 | 45                  | PPT          | R1            |
| 35                                     | Amazon AWS  | 45                  | PPT          | R1            |
| 36                                     | Cloud Software Environments                       | 45                  | PPT          | R1            |

| <b>UNIT -5 (SECURITY IN THE CLOUD )</b> |                                     |    |     |    |
|---|-------------------------------------|----|-----|----|
| 37                                      | Security Overview                   | 45 | PPT | R1 |
| 38                                      | Cloud Security Challenges           | 45 | PPT | R1 |
| 39                                      | Risks                               | 45 | PPT | R1 |
| 40                                      | Software-as-a-Service Security      | 45 | PPT | R1 |
| 41                                      | Security Governance–Risk Management | 45 | PPT | R1 |
| 42                                      | Security Monitoring                 | 45 | PPT | R1 |
| 43                                      | Security Architecture Design        | 45 | PPT | R1 |
| 44                                      | Data Security                       | 45 | PPT | R1 |
| 45                                      | Application Security                | 45 | PPT | R1 |