

###### BCSE0234: CLOUD COMPUTING LAB

**Objective:** *This lab aims to understand the concept of cloud and virtualization by the help of VMware.*

**Credits: 01 L–T–P: 0–0–2**

| **Module No.** | **Content** | **Lab Hours** |
| --- | --- | --- |
| **I/II** | * 1. a) Introduction to Packet Tracer. * b) Network Topologies. (Including explanation of Simple PDU &amp; Complex PDU.) * 2. Connecting 3 netwoks using routers. Also, configure DHCP and DNS server. * 3. Configuration of different Application services (SMTP, FTP, HTTP, TFTP, DHCP & DNS) * 4. Configuration of Vlan and Inter- Vlan Routing. * 5. Configure GRE over IP tunnel (VPN). * 6. Static NAT configuration. * 7. Configure Wireless network. * 8. Configure different IoT devices. * 9. Management of cloud resources using Cloud Analyst. * 10. Simulation of large scale Cloud computing data centers with Cloud Analyst * 11. Study on VMware * a. Creating a VM * b. Networking on VM * c. Merging and splitting disk on VM * d. Cloning the guest OS * e. Deploying VM with template * f. Creating Snapshots * g. Managing Users, Groups, Permissions and Roles * 12. Crating a EC2 instance on AWS * 13. Configuration of db in AWS. * 14. Creation of S3 bucket with single IAM user in AWS. * 14. Creating a AWS infrastructure for an organization on cloudcraft | 12\*2=24 |

**Reference Book:**

* + Raj Kumar Buyya, James Broberg, Andrezei, M. Goscinski,” Cloud Computing”: Principles and

paradigms,2011.

**Outcome:** After completion of Lab, student will be able to:

* + CO1: Understanding about the virtualization by the help of VMware.
  + CO2: Understanding of CISCO packet tracer to build a cloud network infrastructure.
  + CO3: Explain the key components of Amazon web Service and Microsoft Azure.



**Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Program Specific Outcomes (PSOs):**

| **COs** | **POs/PSOs** |
| --- | --- |
| CO1 | PO1,PO5/PSO1 |
| CO2 | PO1,PO3,PO5/PSO1 |
| CO3 | PO1,PO3,PO5,PO7/PSO2 |