Subject Code: LPEIT-115
Subject Name: Cloud Infrastructure and Services Laboratory

Programme: B.Tech.	**L:** 0 **T:** 0 **P:** 2
Semester: 8 (Choice- I)	**Teaching Hours:** 24 Hours
Theory/Practical: Practical	**Credits:** 1
Internal Marks: 30	**Percentage of Numerical/Design Problems:** 100%
External Marks: 20	**Duration of End Semester Exam(ESE):** 1.5 hours
Total Marks: 50	**Elective Status:** Professional Elective-III

Pre-requisites: Basic programming skills and computer fundamentals

Course Outcomes:

After studying this course, the student will be able to

1. Apply knowledge of software tools and techniques with hands-on experience for Cloud related applications.
2. Design solutions for the understanding of the virtual machines, networks and managing users in Cloud Infrastructure.
3. To conduct investigation and develop programming skills in Cloud Computing related applications.
4. Use the modern engineering tools/platforms such as Open stack, Hadoop for solving problems related to Cloud Computing
5. Function on multi-disciplinary teams through mini projects for exploring applications of Cloud Computing in different sectors.

Detailed Contents

1. Install VirtualBox/VMware Workstation with different flavors of Linux or windows OS on top Linux/windows.
2. Introduction to OpenStack and its components.
3. Installation of OpenStack using RDO packstack.
4. Creating and launching a basic virtual machine
5. Creating and managing images and templates
6. Creating and managing networks
7. Creating and managing users
8. Managing security groups and policies
9. Connecting to virtual machine/server from local computer

By using various concepts of syllabus students required to prepare a project in a group of two to three students. The group of students must submit a project report of 8 to 10 pages (approximately) and the team will