**GOVERNMENT OF TAMILNADU**
**DIRECTORATE OF TECHNICAL EDUCATION,CHENNAI**
**STATE PROJECT COORDINATION UNIT**
**(Established under Canada India Institutional Cooperation Project )**

# CURRICULUM

| | |
|---|---|
| Course Name | Linux, Apache, MySQL and PHP |
| Course Code | CSE/2020/020 |
| Course Duration | 60 Hours |
| Minimum Eligibility Criteria and Pre-requisites(if any) | ITI/10th/+2/Diploma/Graduates<br>Basics Knowledge of Database and Networking |
| | |
| Course Objectives | The main course objectives is to learn the LAMP applications . The students will learn the concept of Linux OS, Apache server, Database design using MySql and also know about the creation of website using PHP . |
| | |
| Course Outcomes | The end of training, the participants will be able to run dynamic websites and servers. Due to its flexibility, customization, the Lamp training is effective tool in order to develop & create commercial web applications. |
| | |
| Expected Job Roles | Web Designer, Linux System Administrator |

| TEACHING AND SCHEME OF EXAMINATION | | | | | | |
|---|---|---|---|---|---|---|
| Course Code | Course Name | Hours | | Assessment Marks | | Duration of Examination |
| | | | | Min | Max | |
| CSE/2020/020 | Linux, Apache, MySQL and PHP | Theory | 20 | 10 | 20 | 3 Hours |
| | | Practical | 40 | 40 | 80 | |
| | | Total | 60 | 50 | 100 | |

**CSE/2020/020 - LINUX, APACHE, MYSQL AND PHP**

DETAILED SYLLABUS

| UNIT NO | MODULES | NO.OF.HOURS THEORY |
|---|---|---|
| I | INTRODUCTION TO LAMP COMPONENTS | |
| 1.1 | Introduction to LAMP<br>How To Install Linux, Apache, MySQL, PHP (LAMP) stack on Ubuntu<br>Installing Linux operating system-Installing PHP and MYSQL. | 4 |
| II | LINUX-INSTALLING, CONFIGURING AND WORKING WITH LINUX | |
| 2.1 | Linux-Working with commands<br>File management using commands<br>Vi Editor for text editing<br>Login in Linux (GUI & Console)-Directory Structure of Linux-Listing Files & Directories (ls)-Creating, Moving & Deleting Files and Directories-Searching for Files (locate & find)-Shells (Working effectively in the Command Line)<br>File System Basics & File Management-Pipes, Streams & Redirects-Processes Management | 4 |
| III | APACHE WEB SERVER | |
| 3.1 | Configuring Apache Webserver<br>Virtual host setup-Setting up so the browser can see multiple hosts<br>Configuring virtual hosts<br>Available Modules and turning them on and off.<br>Associating file extensions with modules | 4 |
| IV | DATABASE DESIGN USING MYSQL | |
| 4.1 | Introduction to MySQL<br>Designing Databases<br>Basic SQL<br>Database Structures<br>Doing Advanced Queries-Advanced MySQL Concepts-Managing Users and Privileges<br>Backing Up and Restoring MySQL Databases<br>MySQL Options File and Configuring and Tuning the MySQL Server | 4 |
| V | WEB SITE DESIGN USING PHP | |
| 5.1 | Php-Variables, Constants, Data types,<br>Operators and Control Structures<br>Looping Statements<br>Arrays, PHP functions, Designing webpages<br>PHP Functions, HTML Forms, File handling | |

| | |
|---|---|
| **Total Theory Hours** | **20** |
| **Total Practical Hours** | **40** |
| **Total Hours** | **60** |

## PRACTICAL ( 40 HOURS )

1. Configure and Practice Linux Operating System to create a properly functioning Linux environment.
2. Programs and utilities to administer a Linux machine for web development.
3. Configure Apache Web server for web administration
4. Write a PHP script to get the PHP version and configuration information
5. Write a PHP script to display the following string " Go to the editor"
6. Create a simple HTML form and accept the user name and display the name through PHP echo statement.
7. Write a PHP script to redirect a user to a different page .
8. Write a PHP script to get the client IP address
9. Write a PHP script to display string, values within a table.
   Note : Use HTML table elements into echo.
   **Expected Output :**

| | |
|---|---|
| Salary of Mr. A is | 1000$ |
| Salary of Mr. B is | 1200$ |
| Salary of Mr. C is | 1400$ |

10. Create a script using a for loop to add all the integers between 0 and 30 and display the total.
11. Write a function to check whether a number is prime or not.
12. Write a PHP script to calculate and display average temperature, five lowest and highest temperatures. Go to the editor
    Recorded temperatures : 78, 60, 62, 68, 71, 68, 73, 85, 66, 64, 76, 63, 75, 76, 73, 68, 62, 73, 72, 65, 74, 62, 62, 65, 64, 68, 73, 75, 79, 73
    **Expected Output :**
    Average Temperature is : 70.6
    List of seven lowest temperatures : 60, 62, 63, 63, 64,
    List of seven highest temperatures : 76, 78, 79, 81, 85,
13. Implement audio,video and animation in web pages.
14. Implementation of a server side programming language PHP
15. Implementation of Client side validations

## HARDWARE REQUIREMENT

| S.NO | LIST OF TOOLS /EQUIPMENTS |
|---|---|
| 1 | COMPUTER |
| 2 | PRINTER |

## SOFTWARE REQUIREMENT

| S.NO | LIST OF SOFTWARE |
|---|---|
| 1 | LINUX |
| 2 | APACHE |
| 3 | MYSQL |
| 4 | PHP |

## REFERENCE BOOKS

| S.NO | NAME OF THE BOOK | AUTHOR | PUBLISHER |
|---|---|---|---|
| 1 | Open Source Web Development with LAMP: Using Linux, Apache, MySQL, Perl, and PHP | James LEE & Brent ware | Pearson Education,2003 |
| 2 | Professional LAMP | Jason Gerner | Wrox Edition, 2005 |

## ASSESSMENT AND CERTIFICATION

| S.No | Criteria for assessment |
|---|---|
| 1. | A trainee will be assessed based on the performance in End Examination for Theory and Practical conducted internally in the Project Polytechnic College for a duration of 3 hours |
| 2. | A trainee must have 75% of attendance to appear for End examination in Theory and Practical. |
| 3. | The assessment for theory part will be based on the marks scored in the end examination on the knowledge bank of questions (1 word/objective type questions) |
| 4. | The assessment for practical part will be based on the marks scored in the end examination conducted by the Project Polytechnic and assessed by the Examiners approved by Strategic Plan Implementation Committee (SPIC) of the project polytechnic. |
| 5. | The criteria for successful completion of training is every trainee should score 50% of marks in theory and practical examination. |
| 6. | On successful completion of training , Certificate will be issued to the participants by the Directorate of Technical Education through the Project Polytechnic. |

## END EXAMINATION

## ALLOCATION OF MARKS

| S.No | Description | Max.Marks |
|---|---|---|
| 1. | Theory Examination | 20 |
| 2. | Practical Examination | |
| | a)Procedure | 10 |
| | b)Execution | 30 |
| | c)Output | 20 |
| | d)Record | 20 |
| | **Total Marks** | **100** |

## THEORY MODEL QUESTION PAPER

## CSE/2020/020 - LINUX, APACHE, MYSQL AND PHP

(Maximum Marks : 20 )

(N.B: Answer any **twenty** questions) **20 x 1 = 20 Marks**

1. What is Linux?
2. What is a boot loader?
3. Write the need for Swap Space.
4. What is PHP?
5. What for PHP is used?
6. Write the command used to create a directory in linux OS.
7. Write a command used to create a file in linux OS.
8. How backup can be taken in linux?
9. What command is used to save and quit a shell script file?
10. Name the modes in shell scripting.
11. How to start/stop the web server?
12. What is the default port for HTTP?
13. How to check the version of running apache web server?
14. What command is used to install the package in Apache web server?
15. How to secure a Website hosted on Apache Web Server?
16. What is MySQL?
17. What column names are displayed when this SQL command is executed?
18. Which operator is used to perform integer divisions in MySQL?
19. Which clause is used to sort query elements?
20. What does comparing a known value with NULL result into?
21. Which keyword causes the loop to skip the remainder of its body and immediately retest its condition prior to reiterating?
22. Which PHP function sorts an array in reverse order?
23. How will you concatenate two strings in PHP?
24. Can you assign the default values to function parameters?
25. Which magic constant of PHP returns function name?