SEC 2: PHP Programming

Practical: 50

2 Lectures, 4 Practicals (each in group of 10 to 15)

Total Marks:25

Internal Assessment: 25

Introduction to PHP:	
1. PHP introduction, inventions and versions, Important tools and software requirements (like Web Server, Database, Editors etc.)	**(4L)**
2. PHP with other technologies, scope of PHP	Chap 1, 2, 3 ref 3
3. Basic Syntax, PHP variables and constants	
4. Types of data in PHP , Expressions, scopes of a variable (local, global)	
5. PHP Operators: Arithmetic, Assignment, Relational , Logical operators, Bitwise , ternary and MOD operator.	
6. PHP operator Precedence and associativity	
PHP conditional events and Loops:	**(2L)**
7. PHP IF Else conditional statements (Nested IF and Else)	Chap 4 ref 3
8. Switch case, while ,For and Do While Loop	
9. Goto , Break ,Continue and exit	
PHP Functions:	**(2L)**
10. Function, Need of Function , declaration and calling of a function	Chap 5 ref 4
11. PHP Function with arguments, Default Arguments in Function	
12. Function argument with call by value, call by reference	
13. Scope of Function Global and Local	
String Manipulation and Regular Expression:	**(4L)**
14. Creating and accessing String , Searching & Replacing String	Chap 4 ref 4 (upto table 4.5 pg 128)
15. Formatting, joining and splitting String , String Related Library functions	
16. Use and advantage of regular expression over inbuilt function	
17. Use of preg_match(), preg_replace(), preg_split() functions in regular expression	Pages ref 3 Pg 386-387, ref 5 sec 23.1, 23.9, 23.10
Array:	**(4L)**
18. Anatomy of an Array ,Creating index based and Associative array ,Accessing array	Chap 6 Ref 3, excluding Multi-dimensional arrays (pg 129 to 132)
19. Looping with Index based array, with associative array using each() and foreach()	
20. Some useful Library function	
Handling HTML form with PHP:	**(6L)**
21. Capturing Form Data	Section 9.17 and 9.18 ref 5, Chap 5 ref 1 except pg
22. GET and POST form methods	
23. Dealing with multi value fields	
24. Redirecting a form after submission	

	184 to 190 (6L)
MySQL and PHP: 25. Working with Databases	Chap 10 ref 1

Reference Books:
1. Steven Holzner, "PHP: The Complete Reference Paperback", McGraw Hill Education (India), 2007.

2. Timothy Boronczyk, Martin E. Psinas, "PHP and MYSQL (Create-Modify-Reuse)", Wiley India Private Limited, 2008.

3. Robin Nixon, "Learning PHP, MySQL, JavaScript, CSS & HTML5", 3rd Edition Paperback, O'reilly, 2014.

4. Luke Welling, Laura Thompson, PHP and MySQL Web Development", 4th Edition, Addition Paperback, Addison-Wesley Professsional,2008.

5. David Sklar, Adam Trachtenberg, "PHP Cookbook: Solutions & Examples for PHP Programmers", 2014.

Software Lab Based on PHP
Any convenient architecture: WAMPP, LAMP, XAMPP, IIS, TomCat etc (any web server) maybe used for the following lab exercises.

1. Create a PHP page which accepts string from user. After submission that page displays the reverse of provided string.
2. WAP to sort an array. (using built in php functions)
3. Write a menu driven PHP script that :
    a. Removes the whitespaces from a string.
       Sample string : 'The quick " " brown fox'
       Expected Output : Thequick""brownfox

    b. Checks if a string contains another string. (using built in php functions)
    c. Checks if a string is all lower case. (using regex)
    d. Replace the first 'the' of the following string with 'That'.
       Sample : 'the quick brown fox jumps over the lazy dog.'
       Expected Result : That quick brown fox jumps over the lazy dog.

4. Create a simple 'birthday countdown' script, the script will count the number of days between current day and birth day.
5. $color = array('white', 'green', 'red")
    Write a PHP script which will display the colors in the following way :
    Output :
    white, green, red,
    - green
    - red
    - white
6. Using switch case and dropdown list display a "Hello" message depending on the language selected in drop down list.
7. Create a login page having user name and password. On clicking submit, a welcome message should be displayed if the user is already registered (i.e.name is present in the database) otherwise error message should be displayed.

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8. Write a PHP program to check that the entered email id of the form **username@domainname** is valid and the domain name is present in the database table.
9. Create a database table containing the marks of students in three subjects along with their roll number and name. Create a PHP page to display the mark sheet of the student along with the grade obtained.

Self Learning Exercises PHP:

10. Create a PHP page using functions for comparing three integers and print the largest number.
11. Write a function to calculate the factorial of a number (non-negative integer). The function accept the number as an argument.
12. WAP to check whether the given number is prime or not.
13. WAP to print first n even numbers.

14. Write a PHP script that finds out the sum of first n odd numbers.
15. Write a PHP script that checks whether a passed string is palindrome or not? (A palindrome is word, phrase, or sequence that reads the same backward as forward, e.g., madam or nurses run)
16. Write a PHP program to print Fibonacci series using recursion.
17. Create a script to construct the following pattern, using nested for loop.

```
*
* *
* * *
* * * *
```