PROGRAMME : Diploma Programme in Information Technology (IF) / Computer Technology (CM)
COURSE : PHP Programming (PHP)
COURSE CODE : 21534

TEACHING AND EXAMINATION SCHEME:

Teaching Scheme					Examination Scheme							
Hrs / week			Credits	TH Paper Hrs.	Marks							
TH	TU	PR	HRS			TH	TEST	TH+TEST	PR	OR	TW	TOTAL
03	--	02	05	04	03	Max.	80	20	100	--	--	25	125
						Min.	32	--	40	--	--	10	--

1.0 RATIONALE:

The course of PHP programming has been developed to facilitate acquisition of the open source programming language required in IT industry today. The course aims to improve the understanding of Open source programming language, Software and web application development. The program provides the requisite awareness and knowledge to understand key concepts that can be applied to IT projects focusing on Services provided by web application.

2.0 COURSE OBJECTIVES:

The student will be able to,

1. Describe the concepts of constants, variables, data types and operators
2. Develop program using different looping and branching statements.
3. Code & maintain small PHP web-based applications
4. Introduce power of relational databases using MySQL
5. Examining the various aspects of security, from securing server, database server

3.0 COURSE OUTCOMES:

The course content should be taught and learning imparted in such a manner that students are able to acquire required learning outcome in cognitive, psychomotor and affective domain to demonstrate following course outcomes:

1. Acquire the basic knowledge of PHP syntax for variable use, and standard Language constructs, such as conditionals and loops.
2. State the syntax and use of PHP object-oriented classes.
3. Develop a form containing several fields and be able to process the data.
4. Demonstrate the functions available to deal with file processing.
5. Utilize the power of relational databases using MySQL.

4.0 COURSE DETAILS:

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics	Hours
Unit-I **PHP Fundamentals**	1a. Introduction to PHP 1b. PHP programming basics 1c. Recall operators and control flow statements 1d. Introduction to array and string function. 1e. Concept of Function.	1.1 Introduction to PHP--Concept, PHP--Evolution 1.2 PHP Vs. Other Scripting Languages, PHP vs. ASP, PHP vs. JAVA, PHP vs. Perl. 1.3 PHP Installation--Operating System, Module or CGI, Web Server 1.4 PHP Program Basic-- File Basics, Statements, comments, Literals 1.5 Data Types, Variables, Constants, Scope of Variable. 1.6 Operators & Functions—General operations, String operations, String functions, Numeric	12

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics	Hours
		operations--Bitwise, comparison, Logical operators, operator Precedence. 1.7 Program Flow Control, Structures, Conditional Statements--if, if--else, if--else ladder 1.8 Arrays: One Dimensional Arrays, Multidimensional Arrays, Initializing Arrays, Handling Array with Loops, PHP Array Function. 1.9 Strings: String Function, Converting to String, Converting from String, Formatting Text Strings. 1.10 Functions Types: User Defined, Passed by Value, Passed by Reference. Built In Function, Variable Lifetime, Recursion	
Unit-II **OOP with PHP**	2a. Necessity of Oops approach with Basic terminologies 2b. Data security.	2.1 OOPS approach with PHP, Classes and Objects, Encapsulation, Inheritance, Polymorphism, Cohesion & Coupling 2.2 Access to Properties & Methods, Public Access, Private Access, Protected Access	06
Unit-III **User input & Regular Expressions**	3a. Need of HTML forms 3b. Concept of Regular Expression.	3.1 Introduction to HTML forms 3.2 Handling User Input With $_ GET[], $_POST[], $_REQUEST[]. 3.3 Regular Expressions: Concept, use. 3.4 Types of Regular Expressions, Perl Compatible Expressions. Posix Regular Expression	08
Unit-IV **File Handling in PHP**	4a. Demonstrate Different File and Directory operations	4.1 Files Operations: Open, Close, Read, Write, Navigate, Copy, Delete, Rename. Determining file attributes 4.2 Operations on Directory, Add, Delete, Read Directories 4.3 Uploading Files from Clients, Uploading Files with POST	08
Unit-V **ODBC and MYSQL**	5a. Introduction and necessity of Database 5b. Use of ODBC Database 5c. Use of MySQL 5d. Database Server	5.1 Introduction to Database 5.2 Introduction to ODBC windows 5.3 Configuration of ODBC on windows, Connecting to the database, Manipulating Queries 5.4 Introduction to MYSQL, Connecting to the database, Manipulating Queries 5.5 Concept of Database, abstraction 5.6 Structured Query Language, Data Definition statements, Creating MySQL Database, Use creating table, describe, Alter Table, Drop table, Drop	14

Unit	Major Learning Outcomes (in cognitive domain)	Topics and Sub-topics	Hours
		5.7 Database, Data manipulation & Retrieval statements, Insert, Replace, Delete, Update, Select 5.8 PHP & Relational Databases PHP's MySQL interface, Database Abstraction	
		TOTAL	**48**

5.0 SUGGESTED SPECIFICATION TABLE WITH MARKS (THEORY):

Unit No.	Unit Title	Distribution of Theory Marks			
		R Level	U Level	A and above Levels	Total Marks
I	PHP Fundamentals	10	08	04	22
II	OOP With PHP	06	04	04	14
III	User Input & Regular Expressions	06	02	04	12
IV	File Handling in PHP	04	04	08	16
V	ODBC and MYSQL	04	04	08	16
	TOTAL	**30**	**22**	**28**	**80**

Legends: R = Remembrance (Knowledge); U= Understanding; A= Application and above levels (Revised Bloom's taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

6.0 ASSIGNMENTS/TUTORIALS/PRACTICALS/TASKS:

The tutorial/practical/assignments/tasks should be properly designed and implemented with an attempt to develop different types of cognitive and practical skills **(Outcomes in cognitive, psychomotor and affective domain)** so that students are able to acquire the competencies.

Note: Here only outcomes in psychomotor domain are listed as practical/exercises. However, if these practical/exercises are completed appropriately, they would also lead to development of **Programme Outcomes/Course Outcomes in affective domain** as given in a common list at the beginning of curriculum document for this programme. Faculty should refer to that common list and should ensure that students also acquire those Programme Outcomes/Course Outcomes related to affective domain.

Sr. No.	Unit No.	Practical Exercises (Outcomes in Psychomotor Domain)	Approx. Hrs. Required
01	I	Write a program to show the use of following operators used in PHP Arithmetic, Logical, Comparison, Relational	04
02	I	Write a program using switch case for following cases. - Factorial, Prime number	02
03	II	Write a program use PHP built-in functions: Array functions, String Functions.	04
04	II	Write a program using function to find factorial of number using following function types: User defined functions with pass by value	02
05	II	Write a program to find a raise to b using passing by value with no return type	02
06	II	Write a program to find area & perimeter of Rectangle using passing by reference Function	04
07	III	Write a program to demonstrate use of inheritance.	02
08	IV	Write a program for following File operations: read, write operation	04
09	VI	Write a program for Employee management Using ODBC	04

Sr. No.	Unit No.	Practical Exercises (Outcomes in Psychomotor Domain)	Approx. Hrs. Required
		connectivity with Access	
10	VI	Write a program for Database connectivity using MySQL	04
		TOTAL	**32**

7.0 SUGGESTED STUDENT ACTIVITIES:

Other than the Classroom and laboratory learning, following are the suggested Student-related co-curricular activities. This can be undertaken to accelerate the attainment of the various outcomes in the course,

1. Prepare a sample File System Applications with following details
    a. Online Storage Application,
    b. New User Registration
    c. Logging on
    d. Creating folders, Removing a folder
    e. Uploading files
    f. Logging off
2. Case Study on Various PHP frameworks.
    a. Word Press.
    b. Joomla.

8.0 SPECIAL INSTRUCTIONAL STRATEGIES (If any):

These are sample strategies, which the teacher can use to accelerate the attainment of the various outcomes in this course,

1. Demo lectures with power point presentations using LCD projector should be arranged to develop

9.0 LEARNING RESOURCES:

A) Books:

Sr.No.	Title of Book	Author	Publication
01	Professional PHP4	Argerich, choi, Egervari	SPD, Calcutta
02	Programming PHP	Rasmus Lerdorf	PHP
03	Learning PHP	David Sklar	Pearson Publications.

B) Software/Learning Websites:

1. www.php.net
2. www.w3schools.com/php

C) Major Equipment/ Instrument with Broad Specifications:

1. Software: Server-Apache Server
2. Editor: Sublime text 3.0
3. PHP Stack Softwares: Easy PHP (Version12.0), USB WebServer8.0, WAMP

10.0 MAPPING MATRIX OF PO'S, CO'S AND PSO'S:

Course Outcomes	Programme Outcomes (PO's)							Programme Specific Outcomes (PSO's)			
	1	2	3	4	5	6	7	1	2	3	4
CO1	H	M	M	L	L	--	M	H	--	--	--
CO2	M	M	H	M	--	--	L	L	--	--	--
CO3	--	M	H	M	M	L	L	--	L	M	--
CO4	M	M	H	--	M	--	--	--	H	--	--
CO5	--	--	H	M	M	--	--	--	--	H	L

H: High Relationship, M: Medium Relationship, L: Low Relationship.

11.0 SUGGESTED QUESTION PAPER PROFILE:

Unit No	CO	Marks Per Unit	1.35 Times Marks	Question Number Wise Marks						Actual Distribution of Marks
				01	02	03	04	05	06	
I	CO.1	22	29.7	08	08	08	04	--	--	28
II	CO.2	14	18.9	08	04	04	04	--	--	20
III	CO.3	12	16.2	04	04	04	04	--	--	16
IV	CO.4	16	21.6	04	--	--	04	08	08	24
V	CO.5	16	21.6	04	--	--	--	08	08	20
	TOTAL	**80**	**108**	**28**	**16**	**16**	**16**	**16**	**16**	**108**

a) Suggested Bitwise Distribution:

Unit No.	I							II							III							IV							V							Total
CO	1							2							3							4							5							
Marks per Unit	22							14							12							16							16							80
1.35 Times marks	29.7							18.9							16.2							21.6							21.6							108
Bits	a	b	c	d	e	f	g	a	b	c	d	e	f	g	a	b	c	d	e	f	g	a	b	c	d	e	f	g	a	b	c	d	e	f	g	Total
CO	1	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	5	5	5	5	5	5	
Q1	4	4	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	4	28
Q2	4	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Q3	4	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16
Q4	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	16
Q5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	4	4	-	-	-	16
Q6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	-	-	-	-	-	-	-	4	4	-	-	-	16
Sub Total	28							20							16							24							20							108
TOTAL																																				108