

Seat No: DL10279

Enrollment No: 2405112120073

PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
MCA(A.Y.-II) Winter 2024-25 Examination

Semester: I

Subject Code: 05201204

Subject Name: Open Source Technology Using PHP

Date: 24-12-2024

Time: 02:00 PM TO 4:30 PM

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Make suitable assumptions whenever necessary.
3. Write the answers for both sections on separate answer sheets.

SECTION - A [30 Marks]				
Q1	Answer the following questions:	[20]	CO	BT
(a)	Answer all questions	(5)		
i.	What does FOSS stand for? <input checked="" type="checkbox"/> (A). Free and Open Source Software (B). Free Online Software Solutions (C). Full Operating System Software (D). Functional Open Source Systems	1	CO1	BT1
ii.	What is the purpose of the break statement in a switch case? <input checked="" type="checkbox"/> (A). To terminate the switch statement and exit current case (B). To skip the current case (C). To continue to the next case (D). To repeat the current case	1	CO1	BT2
iii.	Write a simple PHP code snippet to process a form that collects a user's name and email.	1	CO2	BT3
iv.	What does the term "closed source software" refer to?	1	CO1	BT1
v.	How do associative arrays differ from indexed arrays in PHP?	1	CO1	BT2
(b)	Attempt Any Five Questions out of Seven	(15)		
i.	Write a PHP script that sets a session variable and retrieves it on a subsequent page.	3	CO3	BT3
ii.	Provide three examples of widely used open-source products and explain their significance in their respective fields.	3	CO1	BT2
iii.	Create a PHP function findMaxValue(\$arr) that returns the largest number from a given array. Demonstrate its usage with a sample array.	3	CO1	BT3
iv.	Compare the use of error_reporting() and try-catch blocks for managing errors in PHP.	3	CO3	BT4
v.	Compare the differences between configuring MySQL for a small-scale website and a high-traffic web application.	3	CO1	BT3
vi.	What are the different types of arrays in PHP? Explain each type briefly.	3	CO1	BT3
vii.	Evaluate the effectiveness of using client-side validation in addition to server-side form validation in PHP.	3	CO3	BT3
Q2	Answer/Solve following in detail (Attempt any 2 out of 3)	[10]		
(a)	Evaluate the long-term cost benefits of using open-source development tools (e.g., PhpStorm vs. Visual Studio Code) in PHP development.	5	CO1	BT4

• (b)	Describe the syntax of a switch statement in PHP. In what scenarios is a switch statement more useful than an if-else chain?	5	CO1	BT3
• (c)	Define AJAX and explain its purpose in web development, particularly in the context of PHP.	5	CO3	BT4
SECTION - B [30 Marks]				
Q1	Answer the following questions:	[20]	CO	BT
(a)	Answer all questions	(5)		
i.	Which MySQL data type is used to store date values? (A).TIMESTAMP (B).DATETIME (C).DATE (D).All of the above	1	CO2	BT2
ii.	If a class Dog has a method bark() that echoes "Woof!", how can you create an object of Dog and execute the bark() method? (A).Dog bark = new Dog(); (B).\$dog = new Dog(); (C).\$dog = Dog(); (D).new Dog bark(); \$dog->bark(); \$dog.bark();	1	CO4	BT2
iii.	What function is used to get the error description for the last MySQLi operation?	1	CO2	BT3
iv.	What keyword is used to define a destructor in PHP?	1	CO2	BT1
v.	How do you handle errors in a stored procedure in MySQL?	1	CO2	BT2
(b)	Attempt Any Five Questions out of Seven	(15)		
i.	Evaluate the impact of overriding methods in child classes in terms of polymorphism in PHP.	3	CO4	BT2
ii.	Evaluate the performance implications of storing DATETIME versus TIMESTAMP in MySQL.	3	CO2	BT3
iii.	What is object cloning in PHP, and how is it performed?	3	CO4	BT3
iv.	Create a PHP script that connects to MySQL using a specific port (other than the default port).	3	CO2	BT3
v.	Create a class User that utilizes the Database class to fetch user data from a users table.	3	CO4	BT2
vi.	Analyze the performance impact of retrieving large datasets from MySQL using mysqli_fetch_assoc() versus using pagination techniques.	3	CO2	BT4
vii.	Analyze the advantages and disadvantages of using inheritance in PHP.	3	CO4	BT3
Q2	Answer/Solve following in detail (Attempt any 2 out of 3)	[10]		
(a)	Write a MySQL query to define a table with a BOOLEAN column and demonstrate how to insert TRUE and FALSE values.	5	CO2	BT2
(b)	Examine how using prepared statements in PHP improves security when interacting with a MySQL database. Provide an example.	5	CO4	BT4
• (c)	Explain the basic steps required to connect to a MySQL database using PHP.	5	CO2	BT3