Chapter 4
Introduction to Hypertext Pre-Processor

PART – I
I. Choose The Correct Answer

Question 1.
What does PHP stand for?
(a) Personal Home Page
(b) Hypertext Preprocessor
(c) Pretext Hypertext Processor
(d) Pre-processor Home Page
Answer:
(b) Hypertext Preprocessor

Question 2.
What does PHP files have a default file extension?
(a) html
(b) xml
(c) .php
(d) ph
Answer:
(c) .php

Question 3.
A PHP script should start with …….. and end with ……..
(a) <php>
(b) < ? php ?>
(c) < ? ? >
(d) < ?php ? >
Answer:
(d) < ?php ? >

Question 4.
Which of the following must be installed on your computer so as to mn PHP script?
(a) Adobe
(b) windows
(c) Apache
(d) IIS
Answer:
(c) Apache

Question 5.
We can use …….. to comment a single line?
(i) /?
(ii) 11
(iii) #
(iv) /* */
(a) Only (ii)
(b) (i), (iii) and (iv)
(c) (ii), (iii) and (iv)
(d) Both (ii) and (iv)
Answer:
(c) (ii), (iii) and (iv)

Question 6.
What will be the output of the following PHP code?
Ans
< ?php
$num =1;
$num1 =2;
print $num . $num1 ;
?>
(a) 3
(b) 1+2
(c) 1.+.2
(d) Error
Answer:
(a) 3

Question 7.
Which of the following PHP statements Will output Hello World on the screen?
(a) echo (“Hello World”)
(b) print (“Hello World”)
(c) printf (“Hello World”)
(d) sprintf (“Hello World”)
Answer:
(a) echo (“Hello World”)

Question 8.
Which statement will output $x on the screen?
(a) echo “\$x”
(b) echo “$$x”
(c) echo “/$x”
(d) echo “$x

Answer:
(a) echo "\$x"

Question 9.
Which of the below symbols is a newline character?
(a) \r
(b) \n
(c) /n
(d) /r
Answer:
(b) \n

PART – II
II. Short Answers

Question 1.
What are the common usages of PHP?
Answer:

1. It is very simple and lightweight open source server side scripting language.
2. It can easily embed with HTML and other client side scripting languages like CSS (Cascading Style Sheets) and Java script.
3. It also creates dynamic and interaction Webpages in the red time Web development projects.

Question 2.
What is Webserver?
Answer:
Web server software is available as open source or licensed version in the market. A Web server is a Software that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users.

Question 3.
What are the types scripting language?
Answer:
Web scripting languages are classified into two types, client side and server side scripting language. PHP is completely different from Client side scripting language like Java script. The PHP code entirely executes on Webserver which is installed in the remote machine.

Question 4.
Difference between Client and Server?
Answer:
The server is a high performance hardware machine it could run more than one application

concurrently. The client is a separate hardware machine which is connected with server in the network (Intemet/intranet). It could send the request and receive the response from the server hardware. The Server and client are also called as service provider and service requester respectively.

Question 5.
Give few examples of Web Browser?
Answer:
Internet Explorer
UC Browser
Opera
Google Chrome and
Mozilla Firefox.

Question 6.
What is URL?
Answer:
URL: Uniform Resource Locator, the address of a specific Web page or file on the Internet.
Eg. http://example.com

Question 7.
Is PHP a case sensitive language?
Answer:
Yes, smaller case & uppercase letters are different in PHP.

Question 8.
How to declare variables in PHP?
Answer:
The variable in PHP begins with a dollar ($) symbol and the assignment activity implemented using "=" operator, finally the statement ends with semi colon The semicolon indicates the end of statement.
$a=5; $b=T0;

Question 9.
Define Client Server Architecture?
Answer:
The client server architecture introduces application sharing mechanism between two different hardware systems over the network (Intemet/intranet).

Question 10.
Define Webserver?
Answer:
Web server software is available as open source or licensed version in the market.

A Web server is a Software that uses HTTP (Hypertext Transfer Protocol) to serve the files that form Web pages to users.

PART – III
III. Explain in Brief **Answer**
Question 1.
Write the features of server side scripting language?
Answer:

1. The server is a high performance hardware machine it could run more than one application concurrently.
2. Most of the server side scripting languages are working on any one the client server architecture model.
3. Webserver is software which is running in server hardware.
4. It takes the responsibilities for compilation and execution of server side scripting languages.

Question 2.
Write is the purpose of Web servers?
Answer:

1. Webserver is software which is running in server hardware.
2. It takes the responsibilities for compilation and execution of server side scripting languages.
3. After receiving the request from client machine the Web server tries to compile and interpret the PHP code which is available in remote machine.
4. Next a response will be generated and sent back to the client machine over the network from Webserver.

Question 3.
Differentiate Server side and Client Side Scripting language?
Answer:
Server Side Scripting Language:

1. Server is a high performance hardware machine. It could run more than one application concurrently.
2. The server is the service provider.
3. Ex. Php. Asp.net, Python, Cold Fusion
4. It is relatively secure

Client Side Scripting Language:

1. The client is a separate hardware machine which is connected with server in the network.
2. The client is the service requester

3. html, css, Javascript
4. Insecure

Question 4.
In how many ways you can embed PHP code in an HTML page?
Answer:

1. PHP script can be written in side of HTML code and save the file with extension of .php. The embedded PHP file get executed in the Webserver, the browser receives only the HTML and other client side files.
2. Php files can also be embedded with css and js files.
3. Using template engines like Smarty, DWOO, Mustache, Blade we can embed php files.

Question 5.
Write short notes on PHP operator?
Answer:
Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:

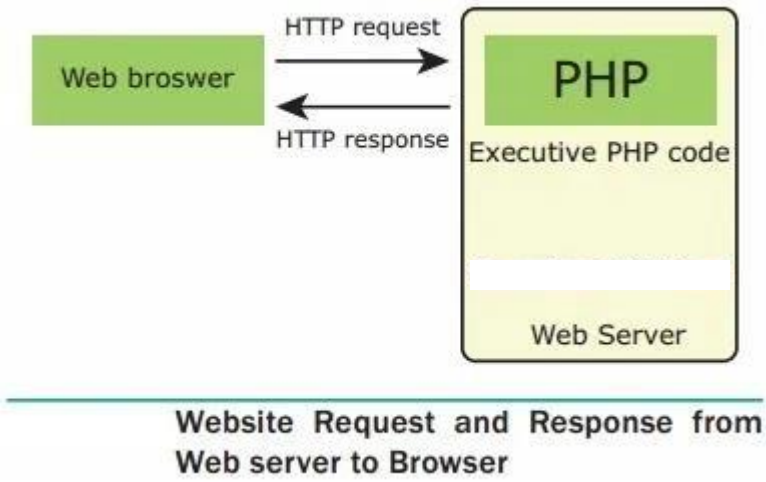
1. Arithmetic operators
2. Assignment operators
3. Comparison operators
4. Increment/Decrement operators,
5. Logical operators, and
6. String operators.

PART – IV
IV. Explain in detail

Question 1.
Explain client side and server side scripting language?
Answer:

1. PHP (Hypertext Pre-processor) is a one of the important server side Web and general purpose scripting language invented by Rasmus Lerdorf in 1994.
2. It is very simple and lightweight open source server side scripting language.
3. It can easily embed with HTML and other client side scripting languages like CSS (Cascading Style Sheets) and Java script.
4. It also creates dynamic and interactive Webpages in the real time Web development projects
5. Web scripting languages are classified into two types, client side and server side scripting language.

6. PHP is completely different from Client side scripting language like Java script.
7. The PHP code entirely executes on Webserver which is installed in the remote machine and it is generating HTML code which is sent to the user.
8. The user receives the HTML code and sees the Website contents via Internet browser in their computer or laptop.
9. PHP also supports OOPs (Object Oriented Programing) concepts. It is applicable to implement all OOPs features such as class, object and inheritance etc. The action is shown in Figure.



Website Request and Response from Web server to Browser

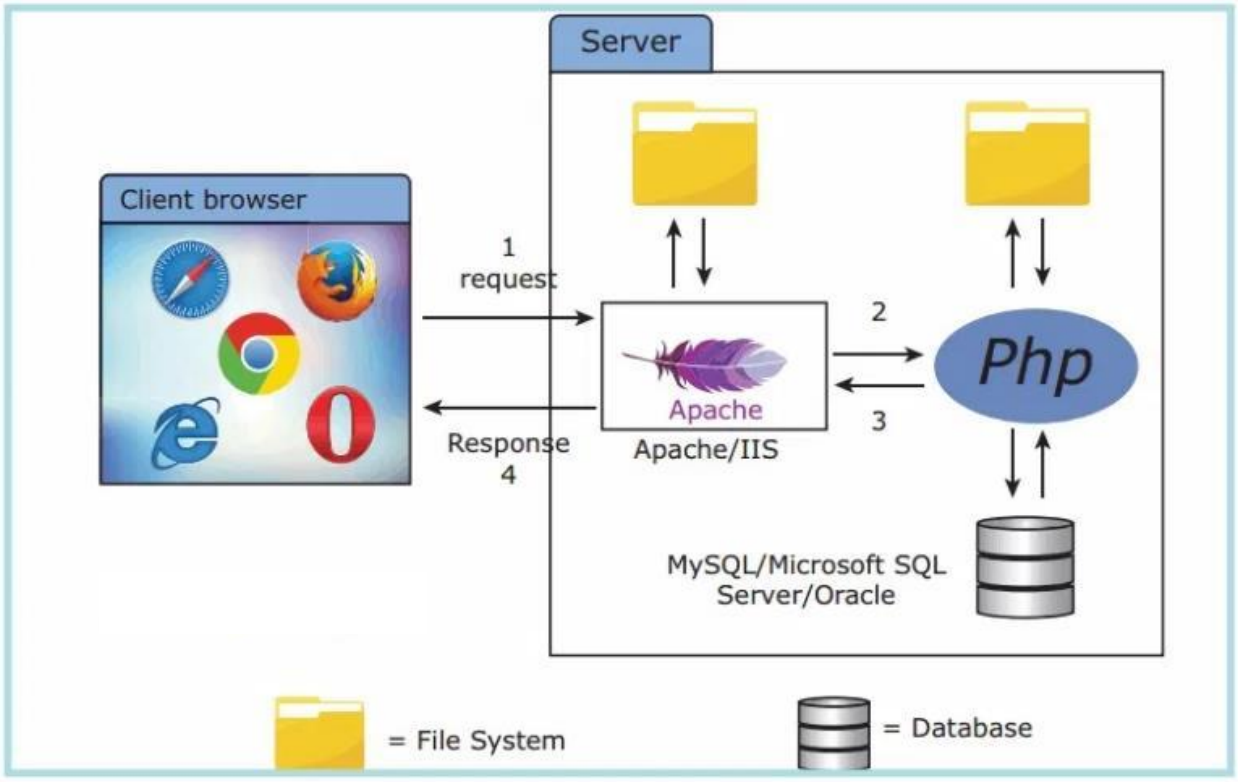
Question 2.
Discuss in detail about Website development activities?
Answer:
The process of development also includes Web content generation, Web page designing, Website security and so on.
PHP Script:
1. Website or Web page is developed by the programmer using PHP script. Finally the entire Website codes are moved to Web server path in a remote server machine.

2. From client side, the end user opens a browser, types the URL of the Website or Webpage and initiates the request to remote server machine over the network.

3. After receiving the request from client machine the Web server tries to compile and interpret the PHP code which is available in remote machine.

4. Next a response will be generated and sent back to the client machine over the network from Webserver.

5. Finally the browser which is installed in the client machine receives the response and displays the output to user.



Question 3.
Explain the process of Webserver installation?
Answer:
Web server software that runs on server hardware, governs the server side scripting compilation into an intermediate byte-code that is then interpreted by the runtime engine.

Web server software is available as open source or licensed version in the market. Recent statistics of Web server usage depict that more than 130% Websites are running under the open source Web servers such as Tomcat Apache, Nginx etc. The following are the steps to install and configure Apache Httpd Webserver and PHP module in windows server machine.

Step 1:
Go to Apache foundation Website and download the Httpd Webserver Software.
https://httpd.apache.org/download.cgi

Step 2:
After downloading .MSI file from Apache foundation Website, user launches the. MSI file and clicks next and next button to finish the installation on server machine. The software

takes default port number 130 or 130130. Once the user finished, the Web server software is installed and configured on server hardware machine as a service.

Step 3:
To test the installation of Apache Httpd Webserver, enter the following URL from your Web browser which is installed in your client machine.
https://localhost:130/ or https://localhost: 130130 The output page that says “Its works”

Step 4:
Administrator user can start, stop and restart the Web server service at any time via windows Control panel. Once the services stops, the client machine will not receive the response message from server machine.

Step 5:
Webserver’s configuration setting “httpd.conf” file is located in the conf directory under the apache installation directory. Edit this file and enable the PHP module to run PHP scripting language.

Question 4.
Discuss in detail about PHP data types?
Answer:
PHP Data type:
PHP scripting language supports 13 primitive data types. Data Types plays important role in all programing languages to classify the data according to the logics. PHP supports the following data types.

1. String
2. Integer
3. Float
4. Boolean
5. Array
6. Object
7. NULL
8. Resource

1. String:
String is a collection of characters within the double or single quotes like
“Computer Application” or ‘Computer Application’. Space is also considered as a character.
Example:
$x = “Computer Application!”;

2. Integer:
Integer is a data type which contains non decimal numbers.
Example:

$x = 59135;
*
The var_dump( ) system define function, returns structured information (type and value) about variables in PHP.

3. Float:
Float is a data type which contains decimal numbers.
Example:
$x = 19.15;

4. Boolean:
Boolean is a data type which denotes the possible two states, TRUE or FALSE
Example:
$x = true;
$y = false;

5. Array:
Array is a data type which has multiple values in single variable.
Example:
Scars = array("Computer","Laptop","Mobile");

OUTPUT:
array(3) {[0]=> string(5) "Computer" [1]=>
string(3) "Laptop " [2]=> string(6)" Mobile"}
Var_dump:
The var_dump( ) function is used to dump information about a variable. This function displays structured information such as type and value of the given variable. Arrays and objects are explored recursively with values indented to show structure.

6. Object:
PHP object is a data type which contains information about data and function inside-the class.

```
<?php
class School {
function marks( ) {
$this->sec = "A";
}
}
// create an object
$schoolobj = new School ( );
?>
```

OUTPUT
NULL

7. NULL:
Null is a special data type which contains a single,value: NULL

```
<?php $x = null;
?>
```

OUTPUT:
NULL

8. Resources:
Resource is a specific variable, it has a reference to an external resource. These variables hold specific handlers to handle files and database connections in respective PHP program.

```
<?php
// Open a file for reading
Shandle = fopen("note.txt", "r");
var_dump($handle);
echo "<br>";
// Connect to MySQL database server with
default setting
Slink = mysql_connect("localhost", "root", "");
var_dump($link);
?>
```

Question 5.
Explain operators in PHP with example?
Answer:
Operators in PHP:
Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:

1. Arithmetic operators
2. Assignment operators
3. Comparison operators
4. Increment/Decrement operators
5. Logical operators, and
6. String operators.

1. Arithmetic operators:
   The arithmetic operators in PHP perform general arithmetical operations, such as addition, subtraction, multiplication and division etc.

Table 4.1 PHP Arithmetic operators		
Symbol	**Operator Name**	**Purpose**
+	Addition	This operator performs the process of adding numbers
-	Subtraction	This operator performs the process of subtracting numbers
*	Multiplication	This operator performs the process of multiplying numbers
/	Division	This operator performs the process of dividing numbers
%	Modulus	This operator performs the process of finding remainder in division operation of two numbers

2. Assignment Operators:
Assignment operators are performed with numeric values to store a value to a variable. The default assignment operator is "=". This operator sets the left side operant value of expression to right side variable.

Table 4.2 PHP Assignment operators		
Assignment	**Similar to**	**Description**
x = y	x = y	This operator sets the left side operant value of expression to right side variable
x += y	x = x + y	Addition
x -= y	x = x - y	Subtraction
x *= y	x = x * y	Multiplication
x /= y	x = x / y	Division
x %= y	x = x % y	Modulus

3. Comparison Operators:
Comparison operators perform an action to compare two values. These values may contain integer or string data types (Number or Strings).

Table 4.3 PHP Comparison operators			
Symbol	**Operator Name**	**Symbol**	**Operator Name**
==	Equal	>	Greater than
===	Identical	<	Less than
!=	Not equal	>=	Greater than or equal to
<>	Not equal	<=	Less than or equal to
!==	Not identical		

4. Increment and Decrement Operators:
Increment and decrement operators are used to perform the task of increasing or decreasing variable's value. This operator is mostly used during iterations in the program logics.

Table 4.4 PHP Increment and Decrement operators		
Operator	**Name**	**Description**
++$x	Pre-increment	Increments $x value by one, then returns $x
$x++	Post-increment	Returns $x, then increments $x by one
--$x	Pre-decrement	Decrements $x by one, then returns $x
$x--	Post-decrement	Returns $x, then decrements $x by one

5. Logical Operators:
Logical Operators are used to combine conditional statements.

Table 4.5 PHP Logical operators			
Symbol	**Operator Name**	**Example**	**Result**
&&	And	$x && $y	True if both $x and $y are true
||	Or	$x || $y	True if either $x or $y is true
!	Not	!$x	True if $x is not true
xor	Xor	$x xor $y	True if either $x or $y is true, but not both

6. String Operators:
Two operators are used to perform string related operations such as Concatenation and Concatenation assignment (Appends).

Table 4.6 PHP String operators

Operator	Name	Example	Result
.	Concatenation	$text1 . $ text2	Concatenation of $txt1 and $txt2
.=	Concatenation assignment	$text1 .= $ text2	Appends $txt2 to $txt1