1. **Attempt all the questions.**   **10×1 = 10**
Circle (O) the correct answer.

i.   Which of following function return 1 when output is successful?
- a)   echo ( )
- **b)   print ( )**
- c)   both
- d)   None

ii. Which keyword is used to put a stop on inheritance?
- a)   stop
- b)   end
- c)   break
- **d)   final**

iii. Which of the following jQuery method sets the html contents of an element?
- **a)   html(val)**
- b)   setHtml(val)
- c)   setInnerHtml(val)
- d)   None of the above.

iv. Which one of the following statements instantiates the mysqli class?
- a)   mysqli = new mysqli()
- **b) $mysqli = new mysqli()**
- c) $mysqli->new.mysqli()
- d)   mysqli->new.mysqli()

v.   Which one of the following variable cannot be used inside a static method?
- **a) $this**
- b) $get
- c) $set
- d) $date

vi. What is the error in the following declaration of a static class method?

```
class car {
        static $speeds = array( 'fast', 'slow', 'medium', );
        static function getSpeeds() {
            return $this->speeds;
        }
}
```

- a)   Static methods must not return a value.
- **b)   The use of $this from within static methods is not possible.**
- c)   Static methods need the method keyword instead of the function keyword.

d) There is no static keyword in PHP.

vii. When you want to store user data in a session use the . . . .
Array.
   a) **$_SESSION**
   b) SYS_SESSION
   c) $SESSION
   d) $_SESSIONS

viii. In your PHP application you need to open a file. You want
the application to issue a warning and continue execution, in
case the file is not found. The ideal function to be used is:
   a) **include()**
   b) require()
   c) nowarn()
   d) getFile(false)

ix. Variables/functions in PHP don't work directly with:
   a) echo()
   b) **isset()**
   c) print()
   d) All of the above

x. Which sign is used to access variable of variable in PHP?
   a) **$$**
   b) $
   c) #@
   d) $@

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. What is DOM? Describe DOM property and method with example.

   Answer:
   The Document Object Model (DOM) is an application programming
   interface (API) for manipulating HTML and XML documents. The
   DOM represents a document as a tree of nodes. It defines the logical
   structure of documents and the way a document is accessed and
   manipulated. DOM is cross-platform and language-independent ways
   of manipulating HTML and XML documents.

   As a W3C specification, one important objective for the Document
   Object Model is to provide a standard programming interface that can
   be used in a wide variety of environments and applications.

   We can create and build documents, navigate their structure, and
   add, modify, or delete elements and content. Anything found in an

HTML or XML document can be accessed, changed, deleted, or added using the Document Object Model

Some major property of DOM are:

childNodes:

The childNodes property help us to get the child nodes of a Node object. It returns a NodeList object, which is an array-like object that we can loop through with the for and for...of loop and spread with the spread operator. It's a read-only property.

```
var divChildren = document.querySelector('div').childNodes;
for (let c of divChildren) {
  if (c.style) {
    c.style.color = 'red';
  }
}
```

To change all the p elements to red. We have to check the style attribute since the text nodes don't have the style property.

firstChild:

The firstChild property help us to get the first child of the given Node object. For example, if we have the following HTML:

```
<div>
<p>foo</p>
<p>bar</p>
<p>baz</p>
</div>
```

We get that the first child is a text node with a newline character with the following JavaScript:

```
var firstChild = document.querySelector('div').firstChild;
console.log(firstChild)
```

This property is a read-only property. If there're no child nodes then it'll return null.

lastChild

The lastChild property help us to get the first child of the given Node object. For example, if we have the following HTML:

```
<div>
<p>foo</p>
<p>bar</p>
```

```
<p>baz</p>
</div>
```

We get that the last child is a text node with a newline character with the following JavaScript:

```
var lastChild = document.querySelector('div').lastChild;
console.log(lastChild)
```

This property is a read-only property. If there're no child nodes then it'll return null.

nextSibiling

The nextSibling property is a read-only property that represents the next Node in the tree or null if none exists.

For example, if we have the following HTML:

```
<div> foo</div>
<div>bar</div>
```

Then we can use the nextSibling property as follows:

```
var nextSibling = document.querySelector('div').nextSibling;
console.log(nextSibling)
```

Some major property of DOM are:

getElementId

getElementId is a method to access any element virtually. It accesses the first element with the specified ID.

```
var myVariable = document.getElementById("my_test");
```

getElementsByTagName:

 getElementByTagName allows you to search all the elements with a specified tag name on your page.

```
Var myLink = document.getElementsByTagName("abc");
```

createElement:

As the name goes, it is used to create an element & place it anywhere in the DOM structure.

```
var myNewListItem = document.createElement("li")
```

Here a new element will be created & added in the DOM structure.

appendChild:

Previously we created element, now we will add two elements to our list of links using appendChild.

```
var myLinkList = document.getElementById("List")

myLinkList.appendChild(myNewListItem);
```

Some other methods of DOM are:

     a. setAttribute

     b. getAttribute

     c. removeChild

3. What is Ajax? Write code to check if phone is available or not into registration form using Ajax?

Answer:
AJAX stands for Asynchronous JavaScript and XML. It is a set of web development techniques which allow web applications to work asynchronously – processing any requests to the server in the background.

JavaScript is a well-known coding language. Amongst its other functionality, it manages dynamic content of a website and allows dynamic user interaction. XML is another variant of a markup language like HTML, as suggested by the name – extensible Markup Language. If HTML is designed to display data, XML is designed to contain and carry data.

Both JavaScript and XML work asynchronously in AJAX. As a result, any web application using AJAX can send and retrieve data from the server without the need to reload the entire page.

Example: Check Phone number using AJAX

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>JavaScript Ajax Phone Demo</title>
<script>
function checkPhone() {
```

```javascript
    // Creating the XMLHttpRequest object
    var request = new XMLHttpRequest();

    // Instantiating the request object
    request.open("POST", "test_phone.php");

    // Defining event listener for readystatechange event
    request.onreadystatechange = function() {
        // Check if the request is compete and was successful
        if(this.readyState === 4 && this.status === 200) {
            // Inserting the response from server into an HTML element
            document.getElementById("result").innerHTML =
this.responseText;
        }
    };

    // Retrieving the form data
    var myForm = document.getElementById("regForm");
    var formData = new FormData(myForm);

    // Sending the request to the server
    request.send(formData);
}
</script>
</head>
<body>
    <form id="regForm">
        <label>Phone:</label>
        <div>
            <input type="number" name="phone" id="phone"
onchange="checkPhone()">
            <span id="result"></span>
        </div>
        <br>
    </form>
</body>
</html>
```

```php
<?php
$phone = $_POST['phone'];
$connection = new mysqli('localhost','root','','db_pmc_bca_2075');
$sql = "select * from tbl_users where phone='$phone'";
$result  = $connection->query($sql);
if ($result->num_rows == 1) {
    echo 'phone already taken';
} else {
    echo 'phone available';
}
 ?>
```

4. Describe properties and method of string object in JavaScript.
Answer: A JavaScript string is data type in any programming language and it's used to store text rather than numbers. In JavaScript, strings are used for manipulating the text. A string can be declared with enclosing of single quotes or double quotes or back ticks like below examples.

```
var singleQuote = 'single-quote';
var doubleQuote = "double-quote";
var backTicks = `back-ticks`;
```

You can use quotes inside the string, as long as they didn't match with surrounding quotes.

```
var person = "It's me..";
var company = 'This is called "test" ';
var company = "This is called 'test ";
```

In JavaScript, String can be objects. Here strings are also be defined as objects with the keyword new:

```
var personNameString = "Ram";
var personNameObject = new String("Ram");
```

Here typeof(personNameString) will return string and typeof(personNameObject) will return object. But the better way to define string without new, because it will affect execution speed and it causes unexpected results.

String properties:

Constructor returns the string's constructor function. **Length** returns the length of a JavaScript string.
Prototype allows you to add methods and properties to an object.

Some major string methods:

charAt():charAt() method will returns the character at the specified position(index).

```
var exString = "Hello world";
var response = exString.charAt(6);
console.log(response);
```

Output: w

concat(): concat() method is used to join strings. This method doesn't change the existing string, it will return the new concatenated string as output. You can concatenate two or more JavaScript strings.

```
var string1 = "Hello";
var string2 = "world";
var response = string1.concat(string2);
console.log (response);
```

Output: Helloworld

indexOf(): indexOf() method determines the first occurrence of a specified value in a JavaScript string and it returns -1 if the value is not found in our occurrence.

```
var string1 = "Hello world, Have a nice day!";
var a = string1.indexOf("Good");
```

Output: -1

replace(): replace() will search a JavaScript string for a specified value or a regular expression and returns a new string where the specified values are replaced.

```
var string = "Winter season!";
var response = string.replace("!", "@");
console.log(response);
```

Output: Winter season@

slice(): slice() method to extract a part of the JavaScript string and it returns a new string. It takes two parameters like start and endpoints that what we want to extract.

```
var string = "Winter season!";
var response = string.slice(0, 6);
console.log(response);
```

Output: Winter

substr(): substr() method always extracts parts of a string, beginning at the character at the specified position, and returns the specified number of characters.

```
var string = "Winter season!";
var response = string.substr(0, 8);
console.log (response);
```

Output: Winter s

substring(): substring() method will extract the characters from the two specified positions in parameters and returns the new substring. Two parameters are starting position and ending positions.

```
var string = "Winter season!";
var response = string.substring(0, 8);
console.log (response);
```

Output: Winter s

toString():toString() method returns the value of a string. If the value in the variable is object then it will convert as a string object.

var string = "Winter season!";

var response = string.toString();

console.log(response);

Output: Winter season!

5.   What is session, Describe how session works with example?
Answer:

Since cookies are stored on user's computer it is possible for an attacker to easily modify a cookie content to insert potentially harmful data in your application that might break your application. You can solve both of these issues by using the PHP session. A PHP session stores data on the server rather than user's computer. In a session based environment, every user is identified through a unique number called session identifier or SID. This unique session ID is used to link each user with their own information on the server like emails, posts, etc. A session is a global variable stored on the server. Each session is assigned a unique id which is used to retrieve stored values. Whenever a session is created, a cookie containing the unique session id is stored on the user's computer/bowser and returned with every request to the server. Sessions have the capacity to store relatively large data compared to cookies. The session values are automatically deleted when the browser is closed. If you want to store the values permanently, then you should store them in the database. Session variables are stored in the $_SESSION array variable. The session must be started before any HTML tags.

The code below shows how to create and retrieve values from sessions.


```php
<?php
session_start(); //start the PHP_session function
if(isset($_SESSION['page_count']))
```

```
{
$_SESSION['page_count'] += 1;
}
else
{
$_SESSION['page_count'] = 1;
}
echo 'You are visitor number ' . $_SESSION['page_count'];
?>
```

Destroying Session Variables

The session_destroy() function is used to destroy the whole PHP session variables.

If you want to destroy only a session single item, you use the unset() function.

The code below illustrates how to use both methods.

```
<?php
session_destroy(); //destroy entire session
?>
<?php
unset($_SESSION['username']); //destroy product session item
?>
```

How Sessions Work

    I.Server opens a session (sets a cookie via HTTP header)

   II.Server sets a session variable.

  III.Client changes page or refresh page.

  IV.Client sends all cookies, along with the session ID from step I.

   V.Server reads session ID from cookie.

  VI.Server matches session ID from a list in a database (or memory).

 VII.Server finds a match, reads variables which are now available on $_SESSION super global.

VIII.If PHP does not find a match with session ID, it will start a new session, and repeat the steps from I-VII.

6. What is jQuery? Describe any 5 jQuery function with example.

Answer: JQuery is a library that makes it quicker and easier to build JavaScript webpages and web apps. Often with jQuery you can write a single line of code to achieve what would have taken 10-20 lines of regular JavaScript code. JQuery allows web developers to plug routine JavaScript features into a web page so they can spend more time focusing on complicated features that are unique to their site. JQuery is itself written in JavaScript, and comes in the form of a single .js file that you link to from your webpage. Your JavaScript code then accesses the library by calling various jQuery functions.

JQuery Basic Syntax Pattern

Basically, jQuery syntax for any statement follows the same pattern. An item from the HTML DOM is selected, and action in the form of a method or function is applied:

```
$(selector).methodOrFunction();
```

All statements come from a basic template for applying functions and methods to selected HTML elements and their attributes. This method can be easily modified depending on the selector and the action, which is the applied method or function.

Below are the some major function of jQuery

Hide function

It is used to hide the selected html element in a simple way. As a name it only works in hidden selected element. In jQuery the Hide () method is very useful. By using this method you can hide HTML elements with the hide().
```
<script>
// We have to use hide function to hide the element as well.
$('#hide_jQuery').click(function(){
      $('#jQuery').hide();
});

</script>
<div id="hide_jQuery">hide</div>
<div id=" jQuery">Lorem....</div>
```

This example, we have created a hide function to hide the selected element.

Below is the First one, the div tag where we have to click for hiding the jQuery.
```
<div id="hide_ jQuery">hide</div>
```

Show function

It is used to show the selected html element. We can say that these functions work in the opposite in hide function. But before calling this function it must use the hide function on the same element

```
<script>
// We have to use hide function to hide the element as well.
$('#hide_ jQuery').click(function(){
     $('# jQuery').hide();
});
$('#show_ jQuery').click(function(){
          $('# jQuery').show();
});
</script>
<div id="hide_ jQuery">hide</div>
<div id="show_ jQuery">show</div>
<div id=" jQuery">Lorem...</div>
```

SlideUp function

This function is used to slide and show element's up side. It slides the selected elements up and removes it slowly.

```
<script type="text/javascript">
$(document).ready(function ()
{
   $("#btnSlideUp").click(function ()
   {
      $("#login_wrapper").slideUp();
      return false;
   });
});
</script>
```

SlideDown function

This function is used to slide and hide an element on down side.

```
<script type="text/javascript">
$(document).ready(function ()
{
   $("#btnSlideDown").click(function ()
   {
      $("#login_wrapper").slideDown();
      return false;
   });
});
</script>
```

Animate function

In jQuery the animate() method is very useful. By using this method we can change the size of elements. In this example we create a div element which contains an Image; when we move the mouse over the image, the image size will change. First of all you add an image to the application. Add a new form to the application and add the following HTML code to the aspx page.

```
<div style="height: 100px; width: 100px; position: relative">
   <img src="animate.gif" id="img" />
</div>
```
Now add the following code in the head section.

```
<script type="text/javascript">
$(document).ready(function () {

   $("div").mouseover(function ()//mouseover function will execute when
mouse pointer will reach on <div>element
   {
     $("img").animate({ height: 300 }, "slow"); //image height will change by
using animate method
     $("img").animate({ width: 300 }, "slow");
     $("img").animate({ height: 100 }, "slow");
      $("img").animate({ width: 100 }, "slow");
   });
});
</script>
```

7.   Write a PHP program to print following list using array and loop.

   a.   Scripting Language
   b.   Software Engineering
   c.   Numerical Method
   d.   Operating System

Answer:

```
<!DOCTYPE html>
<html>
<head>
        <title>List of Course</title>
</head>
<body>
<?php $subjects = ['Scripting Language','Software
Engineering','Numerical Method','Operating System'];?>
<ol type="a">
        <?php foreach($subjects as $subject){ ?>
                        <li><?php echo $subject ?></li>
        <?php } ?>
</ol>
</body>
</html>
```

8. Write a PHP program to upload file in PHP with type's png, jpg and gif.

```php
<?php
if (isset($_POST['upload'])) {
        $err = [];
        //check error
        if (isset($_FILES['photo']['error'])) && $_FILES['photo']['error']
== 0) {
                //check size
                if ($_FILES['photo']['size'] <= 1024000) {
                        //check type
                        $types =
['image/png','image/jpeg','image/gif','image/jpg'];
                        if (in_array($_FILES['photo']['type'],
$types)) {
                                if (file_exists('images/' .
$_FILES['photo']['name'])) {
                                        //generate random file
name
                                        $file_name = uniqid() .
'_' .  $_FILES['photo']['name'];
                                } else {
                                        $file_name =
$_FILES['photo']['name'];
                                }
                                //move to our project folder

        if(move_uploaded_file($_FILES['photo']['tmp_name'],
'images/' . $file_name)){
                                        echo 'File upload
success';
                                } else {
                                        $err['photo'] = 'File can
not move to our folder';
                                }
                        } else {
                                $err['photo'] = 'Invalid file type';
                        }
                } else {
                        $err['photo'] = 'Large image size';
                }
        } else {
                $err['photo'] = 'File upload error';
        }
}


?>
<!DOCTYPE html>
```

```
<html>
<head>
        <title>File Upload Example</title>
</head>
<body>
<h1>File upload</h1>
<form action="" method="post" enctype="multipart/form-data">
        <label>Photo</label>
        <input type="file" name="photo">
        <?php if (isset($err['photo'])) {
                echo $err['photo'];
        } ?>
        <br>
        <input type="submit" name="upload" value="Upload File">
</form>
</body>
</html>
```

Group C

Attempt any TWO questions.   **[2×10 = 20]**

9. Write a program to select list of food record from restaurant database
    with name, price, ingredient and remarks column and display into
    html table.

```
<!DOCTYPE html>
<html>
<head>
        <title>Listing Food</title>
</head>
<body>
<h1>List of Food</h1>
<?php

$server = 'localhost';
$username = 'root';
$password = '';
$database = 'resturants';

//create connection
$connection = new
mysqli($server,$username,$password,$database);
//check connection error
if ($connection->connect_errno != 0) {
        die('Connection error');
}

//query to select data from category table
$sql = "SELECT * FROM foods ORDER BY id desc";
//execute query and get result object
```

```
$result = $connection->query($sql);

$data = [];

if ($result->num_rows > 0) {
        while ($row = $result->fetch_assoc()) {
                array_push($data, $row);
        }
}
?>
<table border="1">
        <tr>
                <th>SN</th>
                <th>Name</th>
                <th>Price</th>
                <th>Ingredient</th>
                <th>Remarks</th>
        </tr>
<?php foreach($data as $key => $value){ ?>
        <tr>
                <td><?php echo $key+1 ?></td>
                <td><?php echo $value['name'] ?></td>
                <td><?php echo $value['price'] ?></td>
                <td><?php echo $value['ingredient'] ?></td>
                <td><?php echo $value['remarks'] ?></td>
        </tr>
<?php } ?>
</table>
</body>
</html>
```

10. What is Inheritance? What is advantage of inheritance? Describe we can achieve multiple inheritance in PHP.

Answer:

Inheritance allows you to create a new class that reuses the properties and methods from an existing class. A class that inherits from another class is called subclass (also a child class or a derived class). The class from which the subclass inherits is known as parent class (also a superclass or a based class). Besides inheriting properties and methods from the parent class, a subclass class can have additional properties and methods.

Main advantage of inheritance is very useful if you want to create several similar classes. You put the common properties and methods in the parent class and specific properties and methods in the child classes. This helps you avoid duplicate code that implements the same properties and method in many classes. We use extends keyword to inherit from a parent class.

```
classParentClass {
// properties and methods here
}
classChildClass extends ParentClass {
// additional properties and methods here
}
```

PHP does not support Multiple Inheritance but using interfaces or traits, we can implement it in PHP.

Using Class along with Interface

Syntax:

```
class childclass extends parentclass implements interface1, …
```

Example:

```php
<?php
class A
{
        public function insideA()
        {
                echo "A";
         }
}
interface B
 {
        public function insideB();
}
class Multiple extends A implements B
        function insideB(){
                echo "\n Interface";
        }
        public function insidemultiple()
        {
        echo "\n Inherited";
        }
}
$check = new multiple();
$check->insideA();
$check->insideB();
$check->insidemultiple();
?>
```

```php
<?php
class A
{
        public function insideA()
        {
                echo "A";
        }
}
interface B
 {
        public function insideB();
}
class Multiple extends A implements B
         function insideB(){
                echo "\n Interface";
        }
         public function insidemultiple(){
         echo "\n Inherited";
        }
}
$check = new multiple();
$check->insideA();
$check->insideB();
$check->insidemultiple();
?>
```

Output: A Interface Inherited

In the above example, Interface "B" used with the class "A" to implement multiple inheritances. The important point is that it cannot define the function inside the interface; it should be set inside the child class "Multiple". We are calling all the functions using the child (Multiple) objects named "check".

11. Why we need to perform validation in both client and server side? Validate registration form with name, email, age, phone and website with required and its related type validation.

Answer:
Client-side validation is a solution for highly interactive forms with on-the-fly field validation, but it will not prevent an ill-intentioned user from injecting and posting invalid formatted data to the server. It is important that your server-side script validates everything the user is doing, otherwise you will expose your site to SQL injection attacks, XSS attacks, users doing stuff they are not supposed to etc.

For following reasons we need both side of validation.

a. User has disabled JavaScript
b. An evil user in purpose has removed the JavaScript in order to exploit the system
c. With JavaScript validation you reducing the data traffic between the website and the client.
d. And of course with server validation you make sure once for all that the data are correct

Server side validation:

```
<!DOCTYPE html>
<html>
<head>
<title>Register Forms</title>
<style type="text/css">
form{
        border: 1px solid black;
        padding: 10px;
        width: 50%;
}

.form-block{
        padding: 10px 10px 5px 10px;
        border-bottom: 1px solid #98a;
}

.form-block:last-child{
        border-bottom: none;
}
</style>
</head>
<body>
<h1>Register Forms</h1>
<?php
//check button click or form submission status
if (isset($_REQUEST['register'])) {
//define blank array to store error
$err = [];
//check existence of name and empty value
if (isset($_POST['name']) && !empty($_POST['name'])) {
$name =  $_POST['name'];
} else {
// $err_name =  'Enter name';
$err['name']   = 'Enter name';
}
```

```php
//check existence of email and empty value
if (isset($_POST['email']) && !empty($_POST['email'])) {
$email =  $_POST['email'];
if (!filter_var($email,FILTER_VALIDATE_EMAIL)) {
        $err['email'] = 'Enter valid email';
}
} else {
// $err_email =  'Enter email';
$err['email'] = 'Enter email';
}

//check existence of phone and empty value
if (isset($_POST['phone']) && !empty($_POST['phone'])) {
$phone =  $_POST['phone'];
if (!filter_var($phone,FILTER_VALIDATE_INT)) {
        $err['phone'] = 'Enter valid phone';
}
} else {
// $err_phone =  'Enter phone';
$err['phone'] = 'Enter phone';
}

//check existence of website and empty value
if (isset($_POST['website']) && !empty($_POST['website'])) {
$website =  $_POST['website'];
if (!filter_var($website,FILTER_VALIDATE_URL)) {
        $err['website'] = 'Enter valid website';
}
} else {
// $err_website =  'Enter website';
$err['website'] = 'Enter website';
}
}

?>
<form action="<?php echo $_SERVER['PHP_SELF'] ?>" method="post" >
<div class="form-block">
<label>Name</label>
<input type="text" name="name">
<?php if (isset($err['name'])) {
        echo $err['name'];
} ?>
</div>
<div class="form-block">
<label>Email</label>
<input type="text" name="email">
<?php if (isset($err['email'])) {
        echo $err['email'];
} ?>
```

```
</div>
<div class="form-block">
<label>Phone</label>
<input type="text" name="phone">
<?php if (isset($err['phone'])) {
        echo $err['phone'];
} ?>
</div>
<div class="form-block">
<label>Website</label>
<input type="text" name="website">
<?php if (isset($err['website'])) {
        echo $err['website'];
} ?>
</div>
<div class="form-block">
<input type="submit" value="Register" name="register">
</div>
</form>
</body>
</html>
```

Course Title: Scripting Language   Full Marks: 60
Course No: CSCS254   Pass Marks: 24
Level: BCA Second Year/ Fourth Semester   Time: 3 Hrs.

Group A

1. Attempt all the questions.   **10×1 = 10**
Circle (O) the correct answer.

   i. $.foo() is equivalent to ?
- a) javascript.foo();
- b) document.foo();
- **c) jQuery.foo();**
- d) none of the above

   ii.   what are the advantages of Ajax?
- a) Bandwidth utilization
- b) More interactive
- c) Speeder retrieval of data
- **d) All of these**

   iii.   Which option will you select to find the unpublished articles in Joomla?
- a) Component manager
- b) Media manager
- **c) Article manager**
- d) None of the above

iv. Which of the following function is used to sort an array in descending order in PHP?
- a) sort();
- b) asort ();
- **c) rsort();**
- d) dsort ();

v. Which two predefined variables are used to retrieve information from forms?
- a) $GET & $POST
- **b) $_GET & $_POST**
- c) $_GET & $_SET
- d) GET & SET

vi. What is the correct JavaScript syntax to write "Hello World"?

- a) System.out.println("Hello World")
- b) println("Hello World")
- c) response.write("Hello World").
- **d) document.write("Hello World")**

vii. Which clause is used to "modify the existing filed of the table"?
- **a) ALTER**
- b) FROM
- c) SELECT
- d) MODIFY

viii. In MVC architecture the model is referred to
- a) Shape of data
- b) Html content
- **c) Collection of data**
- d) Type of data

ix. Which key is used to link two table in MySQL?
- a) Primary Key
- **b) Foreign Key**
- c) Both a) and b)
- d) None of the mentioned

x. Which of the following provides the size of the uploaded file in PHP?
- a) $_FILES['file']['tmp_name']
- b) $_FILES['file']['name']
- **c) $_FILES['file']['size']**
- d) $_FILES['file']['type']

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. Explain the concept structure and importance of DOM.

Answer:
The Document Object Model (DOM) is an application programming interface (API) for manipulating HTML and XML documents. The DOM represents a document as a tree of nodes. It defines the logical structure of documents and the way a document is accessed and manipulated. DOM is cross-platform and language-independent ways of manipulating HTML and XML documents.

Importance of DOM

As a W3C specification, one important objective for the Document Object Model is to provide a standard programming interface that can be used in a wide variety of environments and applications. We can create and build documents, navigate their structure, and add, modify, or delete elements and content. Anything found in an HTML or XML document can be accessed, changed, deleted, or added using the Document Object Model

DOM Structure
When you open any web page in the browser, the HTML of the page is loaded and presented to the screen. JavaScript can be used to dynamically add a page's DOM to add, delete, and modify elements. The DOM represents a document as a tree structure of simple HTML Document.
DOM Nodes
All HTML Elements are treated as nodes or objects. The nodes are attributes, elements, text, link, document, etc.…
Document -Document node
HTML element – Element node
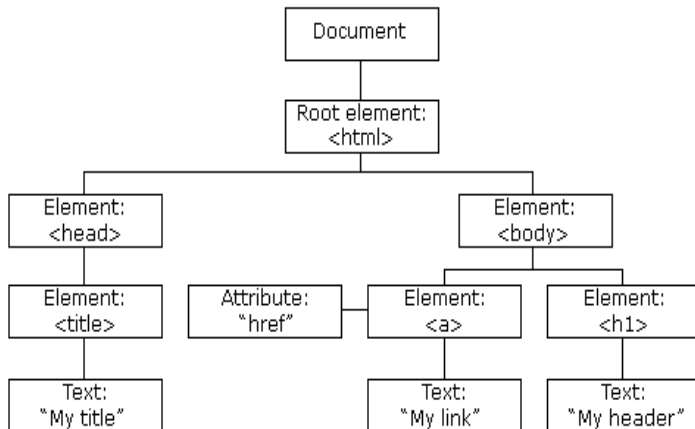HTML attribute – Attribute Nodes
Text inside HTML elements – Text nodes
Simple example of DOM tree of following HTML code


```
<!DOCTYPE html>
<html>
<head>
    <title>My title</title>
</head>
<body>
    <h1>My header</h1>
    <a href="mylink.html">My link</a>
</body>
</html>
```


DOM tree of above HTML code.

3. What is JavaScript? Write JavaScript code to print smallest and largest numbers among 10 elements of an array.

Answer: JavaScript is a programming language used primarily by web browsers to create a dynamic and interactive experience for the user. Most of the functions and applications that make the Internet indispensable to modern life are coded in some form of JavaScript.

JavaScript is a scripting or programming language that allows you to implement complex features on web pages — every time a web page does more than just sit there and display static information for you to look at — displaying timely content updates, interactive maps, animated 2D/3D graphics, scrolling video jukeboxes, etc.

Program to find largest and smallest number among array of 10 numbers:

```
<!DOCTYPE html>
<html>
<body>
    <head>
        <title>
            JavaScript largest and smallest in array
        </title>
    </head>
<h2>JavaScript largest and smallest in array</h2>
<script>
```

```
var numbers = [78, 89, 14, 85, 12, 66,65,25,34,79];

function myFunction() {
  numbers.sort(function(a, b){return a - b});
  document.write('largest number is' + numbers[9]);
  document.write('smallest number is' + numbers[0]);
}
myFunction();
</script>
</body>
</html>
```

4. What is dialog box? Explain different dialog boxes with suitable example in JavaScript.

In JavaScript you can create dialog boxes or popups to interact with the user. You can either use them to notify a user or to receive some kind of user input before proceeding.

The appearance of these dialog boxes is determined by the operating system and/or browser settings, they cannot be modified with the CSS. Also, dialog boxes are modal windows; when a dialog box is displayed the code execution stops, and resumes only after it has been dismissed.

JavaScript has three kind of dialog boxs:

1. Alert box
2. Confirm box
3. Prompt box.

These dialog boxes can be used to raise and alert, or to get confirmation on any input from the users.
Alert box :
An alert dialog box is mostly used to give a warning message to the users.

```
<html>
<head>
<title>Javascript Alert Box</title>

<script type="text/javascript">
function Alert() {
  alert ("This is a Sample alert message!");
}
</script>

</head>
<body>
```

```html
      <form>
        <input type="button" value="Click Here" onclick="Alert();" />
      </form>
</body>
</html>
```

Confirm box :
A confirmation dialog box is mostly used to take user's consent on
any option. It displays a dialog box with two buttons: Ok Button and
Cancel Button.
If the user clicks on the OK button, the window method confirm() will
return true. If the user clicks on the Cancel button, then confirm()
returns false.

```html
<html>
<head>
<title>Javascript Confirm Box</title>

<script type="text/javascript">
function getConfirmation(){
  var conf_box = confirm("Are you sure to leave this website");
}
</script>

</head>

<body>

<form>
 <input type="button" value="Click Here" onclick="getConfirmation();"
/>
</form>

</body>
</html>
```

Prompt box :
a prompt box pops up, the user will have to click either "OK" or
"Cancel" to proceed after entering an input value. If the user clicks
"OK" the box returns the input value. If the user clicks "Cancel" the
box returns null.

```html
<html>
<head>
<title>Javascript Prompt Box</title>

<script type="text/javascript">
function getBook(){
  var book = prompt("Enter Book Name : ", "");
  document.write("Your book name is : " + book);
}
```

```
</script>

</head>
<body>
<form>
 <input type="button" value="Click Here" onclick="getBook();" />
</form>

</body>
</html>
```

5. Explain the two HTTP functions to accept the user values from interface with suitable PHP program.

    Program can collect user data using get and post http method in PHP.

    GET method is used to appends form data to the URL in name or value pair. If you use GET, the length of URL will remain limited. It helps users to submit the bookmark the result. GET is better for the data which does not require any security or having images or word documents.

    POST is a method that is supported by HTTP and depicts that a web server accepts the data included in the body of the message. POST is often used by World Wide Web to send user generated data to the web server or when you upload file.

    Features of GET

    It is very easy to bookmark data using GET method.
    The length restriction of GET method is limited.
    You can use this method only to retrieve data from the address bar in the browser.
    This method enables you to easily store the data.

    Features of POST

    POST method request gets input from the request body and query string.
    Data passed using the POST method will not visible in query parameters in browser URL.
    parameters of POST methods are not saved in browser history.
    There is no restriction in sending the length of data.
    It helps you to securely pass sensitive and confidential information like login details to server.

    User can get from data using following code for get an post.

    <!DOCTYPE html>

```html
<html>
<head>
    <title>Form GET</title>
</head>
<body>
<?php
if (isset($_GET['btnGET'])) {
    $full_name = $_GET['full_name'];
    $username = $_GET['username'];
}

if (isset($_POST['btnPOST'])) {
    $full_name = $_POST ['full_name'];
    $username = $_POST ['username'];
}
?>
<form action="" method="get">
    <label>Full Name * </label><br>
    <input type="text" name="full_name">
    <br>
    <label>Username</label><br>
    <input type="text" name="username">
    <br>
    <input type="submit" name="btnGET">
</form>
<br>
<br>
<form action="" method="post">
    <label>Full Name * </label><br>
    <input type="text" name="full_name">
    <br>
    <label>Username</label><br>
    <input type="text" name="username">
    <br>
    <input type="submit" name="btnPOST">
</form>
</body>
</html>
```

6. What is the use of jQuery? Write the sample program to show and hide the certain div with the use of jQuery.

   JQuery is a fast, small JavaScript library included in a single .js file. It provides many built-in functions using which you can accomplish various tasks easily and quickly. JQuery is a framework built using JavaScript capabilities. Hence, you can use all the functions and other capabilities available in JavaScript.

   Major uses of jQuery.

JQuery can be used to develop Ajax based applications.
It can be used to make code simple, concise and reusable.
It simplifies the process of traversal of HTML DOM tree.
It can also handle events, perform animation and add ajax support in web applications.

Code to hide show div using jQuery.

```html
<!DOCTYPE html>
<html>
<head>
    <title>Hide Show Example</title>
</head>
<body>
<button id="hide">Hide Paragraph</button>
<button id="show">Show Paragraph</button>
<div>Lorem ipsum dolor sit amet, consectetur adipisicing elit, sed do eiusmod
tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam,
quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo
consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse
cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non
proident, sunt in culpa qui officia deserunt mollit anim id est laborum.</div>
<script type="text/javascript" src="../unit3/js/jquery.min.js"></script>
<script type="text/javascript">
    /*
    $(selector).method();
    */
    $(document).ready(function(){
        $('#hide').click(function(){
            $('div').hide()
        });
        $('#show').click(function(){
            $('div').show()
        });

    });
</script>
</body>
</html>
```

7. Why Ajax is required in web development? Write a sample program to synchronize data between JavaScript and PHP.

AJAX stands for Asynchronous JavaScript and XML. Ajax is not a programming language or a tool, but a concept. Ajax is a client-side script that communicates to and from a server/database without the need for a postback (process of submitting web page to the server for processing) or a complete page refresh. Ajax is "the method of exchanging data with a server, and updating parts of a web page – without reloading the entire page."

Importance of Ajax in Web Development

Ajax is a technique for creating better, faster and smarter web application with the use of XML, HTML, CSS, JavaScript.

Auto-Reload page: In early 90's, web pages were containing only page information. But now, the developer uses the AJAX technique which helps to auto reload the page with current updates. So that the user can easily update with the current information.

Secured Connection: Ajax provides one-one interface between client and server. So that it helps to secure the data of user and pass that data to the server in a secure way. So, we can say that, Ajax is not only securing the data but also increasing efficiency.

Open Source: Ajax is open source web development program. Anyone can modify the code of Ajax for implementing better and advanced functionality to their application. The developer can update the Ajax Software for updating the latest functionality of flexibility for their application and use.

Program to synchronize data between JavaScript and PHP

checkUser.php

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>JavaScript Ajax Phone Demo</title>
<script>
function checkUsername() {
   // Creating the XMLHttpRequest object
   var request = new XMLHttpRequest();

   // Instantiating the request object
   request.open("POST", "test_username.php");

   // Defining event listener for readystatechange event
   request.onreadystatechange = function() {
      // Check if the request is compete and was successful
```

```
        if(this.readyState === 4 && this.status === 200) {
            // Inserting the response from server into an HTML element
            document.getElementById("result").innerHTML =
this.responseText;
        }
    };

    // Retrieving the form data
    var myForm = document.getElementById("regForm");
    var formData = new FormData(myForm);

    // Sending the request to the server
    request.send(formData);
}
</script>
</head>
<body>
    <form id="regForm">
        <label>Username:</label>
        <div>
            <input type="text" name="username" id="username"
onchange="checkUsername()">
            <span id="result"></span>
        </div>
        <br>
    </form>
</body>
</html>
```

test_username.php

```
<?php
$username = $_POST['username'];
$connection = new mysqli('localhost','root','','db_bca');
$sql = "select * from tbl_users where username='$username'";
$result  = $connection->query($sql);
if ($result->num_rows == 1) {
    echo 'username already taken';
} else {
    echo 'username available';
}
 ?>
```

8. What is CMS, Write the steps to create submenu in WordPress or
    Joomla?

    The Content Management System (CMS) is a software which stores
    all the data such as text, photos, music, documents, etc. and is made
    available on your website. It helps in editing, publishing and
    modifying the content of the website.

Features of CMS

User Management: It allows managing the user information such as changing the role of the users to (subscriber, contributor, author, editor or administrator), create or delete the user, change the password and user information. The main role of the user manager is Authentication.

Media Management: It is the tool for managing the media files and folder, in which you can easily upload, organize and manage the media files on your website.

Theme System: It allows modifying the site view and functionality. It includes images, stylesheet, template files and custom pages.

Extend with Plugins: Several plugins are available which provides custom functions and features according to the users need.

Search Engine Optimization: It provides several search engine optimization (SEO) tools which makes on-site SEO simple.

Multilingual: It allows translating the entire content into the language preferred by the user.

Importers: It allows importing data in the form of posts. It imports custom files, comments, post pages and tags.

If you want to add a submenu on a page from your menu you need to do just two steps:

1. Go at "Appearance" -> "Menus"
2. Add the new page under the main page.

Group C

Attempt any TWO questions. **[2×10 = 20]**

9. Design following form in HTML and display the value in the result box after calculating basic arithmetic operation based on the use input with the use of JavaScript.

```
<!DOCTYPE html>
<html>
<head>
        <title>Basic Arithmetic</title>
</head>
<body>
<form action="" method="">
        <fieldset>
                <h1>Basic Arithmetic Operation</h1>
                <input      type="number"      name="operand1"
id="operand1"><br>
                <br>
```

```
                <input        type="number"      name="operand2"
id="operand2"><br>
                <br>
                <button id="add">Add</button>
                <button id="sub">Sub</button>
                <button id="mul">Mul</button>
                <br>
                <br>
                <button id="div">Div</button>
                <button id="mod">Mod</button>
                <br>
                <br>
                <input         type="number"       name="result"
id="result"><br>
        </fieldset>

<script type="text/javascript">
        document.querySelector("#add").addEventListener("click",
function(event) {
                operand1                                         =
document.getElementById('operand1').value;
                operand2                                         =
document.getElementById('operand2').value;
                document.getElementById('result').value          =
parseInt(operand1)  + parseInt(operand2);
        event.preventDefault();
        }, false);

        document.querySelector("#sub").addEventListener("click",
function(event) {
                operand1                                         =
document.getElementById('operand1').value;
                operand2                                         =
document.getElementById('operand2').value;
                document.getElementById('result').value          =
parseInt(operand1)  - parseInt(operand2);
        event.preventDefault();
        }, false);

        document.querySelector("#mul").addEventListener("click",
function(event) {
                operand1                                         =
document.getElementById('operand1').value;
                operand2                                         =
document.getElementById('operand2').value;
```

```
                document.getElementById('result').value        =
parseInt(operand1)  * parseInt(operand2);
      event.preventDefault();
          }, false);

          document.querySelector("#div").addEventListener("click",
function(event) {
                operand1                                  =
document.getElementById('operand1').value;
                operand2                                  =
document.getElementById('operand2').value;
                document.getElementById('result').value        =
parseInt(operand1)  / parseInt(operand2);
      event.preventDefault();
          }, false);

          document.querySelector("#mod").addEventListener("click",
function(event) {
                operand1                                  =
document.getElementById('operand1').value;
                operand2                                  =
document.getElementById('operand2').value;
                document.getElementById('result').value        =
parseInt(operand1) %  parseInt(operand2);
      event.preventDefault();
          }, false);
</script>
</form>
</body>
</html>
```

10. Write an object oriented PHP program to implement the concept of inheritance in considering with following class diagram with the use of constructor for 20 students.

```php
<?php
class Employee{
        private $name,$address;
        public function setName($name){
                $this->name = $name;
        }
        public function setAddress($address){
                $this->address = $address;
        }
}
class Permanent{
```

```php
        private $post,$salary;

        function __construct($name,$address,$salary,$post){
                $this->name= $name;
                $this->address= $address;
                $this->salary= $salary;
                $this->post= $post;

        }

        public function setSalary($salary){
                $this->salary = $salary;
        }

        public function setPost($post){
                $this->post = $post;
        }

        public function displayAll(){
                echo 'Name:'  . $this->name;
                echo 'Address:'  . $this->address;
                echo 'Post:'  . $this->post;
                echo 'Salary:'  . $this->salary;
        }
}

$emp1 = new Permanent('Rajesh Thapa','KTM','MD',65255);
$emp1 = new Permanent('Hari Thapa','KTM','MD',65255);
$emp12 = new Permanent('Razz Thapa','KTM','MD',65255);
$emp13 = new Permanent('Sita Thapa','KTM','MD',65255);
$emp14 = new Permanent('Gita Thapa','KTM','MD',65255);
$emp15 = new Permanent('Nita Thapa','KTM','MD',65255);
$emp16 = new Permanent('Geeta Thapa','KTM','MD',65255);
$emp17 = new Permanent('Neeta Thapa','KTM','MD',65255);
$emp18 = new Permanent('Raj Thapa','KTM','MD',65255);
$emp19 = new Permanent('emp1k Thapa','KTM','MD',65255);
$emp4 = new Permanent('Ritu Thapa','KTM','MD',65255);
$emp41 = new Permanent('Situ Thapa','KTM','MD',65255);
$emp51 = new Permanent('emp1 Thapa','KTM','MD',65255);
$emp61 = new Permanent('Preety Thapa','KTM','MD',65255);
$emp71 = new Permanent('Priti Thapa','KTM','MD',65255);
$emp81 = new Permanent('Saru Thapa','KTM','MD',65255);
$emp91 = new Permanent('Paru Thapa','KTM','MD',65255);
$emp121 = new Permanent('Neru Thapa','KTM','MD',65255);
$emp19 = new Permanent('Seru Thapa','KTM','MD',65255);
$emp17 = new Permanent('Joru Thapa','KTM','MD',65255);
```

```
?>
```

11. Design following forms in HTML and write corresponding PHP and MySQL code to store the user's values after satisfying following validation rules.

    a. Length of Full name up to 40 character
    b. Email address muse be valid email address
    c. Username must be start with string and followed by number.
    d. Password length must be more than 8 character.

```php
<!DOCTYPE html>
<html>
<head>
<title>Basic Form Validation</title>
</head>
<body>
<?php

if (isset($_POST['btnSubmit'])) {
$err = [];

if (isset($_POST['full_name']) && !empty($_POST['full_name']) &&
    trim($_POST['full_name'])) {
$full_name = trim($_POST['full_name']);
if (strlen($full_name) > 40) {
$err['full_name'] = 'Full name must be less than 40 characters';
}
} else {
$err['full_name'] = 'Enter your full name';
}

if (isset($_POST['email']) && !empty($_POST['email']) &&
    trim($_POST['email'])) {
$email = trim($_POST['email']);
if (!filter_var($email,FILTER_VALIDATE_EMAIL)) {
$err['email'] = 'Enter valid email';
}
} else {
$err['email'] = 'Enter your email address';
```

```php
}
if    (isset($_POST['username'])    &&    !empty($_POST['username'])    &&
        trim($_POST['username'])) {
$username = trim($_POST['username']);
if (!preg_match('%^[a-zA-Z]+[0-9]?$%', $username)) {
$err['username'] = 'Enter valid username';
}
} else {
$err['username'] = 'Enter your username';
}

if    (isset($_POST['password'])    &&    !empty($_POST['password'])    &&
        trim($_POST['password'])) {
$password = trim($_POST['password']);
if (strlen($password) < 8) {
$err['password'] = 'Password must be greater than 8 characters';
}
} else {
$err['password'] = 'Enter your Password';
}

if (count($err) == 0) {
$server = 'localhost';
$username = 'root';
$password = '';
$database = 'db_bca_2075';

//create connection
$connection = new mysqli($server,$username,$password,$database);
//check connection error
if ($connection->connect_errno != 0) {
die('Connection error');
}

//query to select data from category table
$sql    =    "INSERT    INTO    tbl_users(full_name,email,username,password)
        VALUES ('$full_name','$email','$username','$password')";
//execute query and get result object
$connection->query($sql);

if ($connection->affected_rows == 1 && $connection->insert_id == 1) {
echo "User created successfully";
} else {
echo "User creation failed";
}
}
}
```

```php
?>
<form action="" method="post">
<fieldset style="width:20%">

<legend>Register</legend>
<p>* is required field</p>
<label>Full Name * </label><br>
<input type="text" name="full_name">
<br>
<?php
if (isset($err['full_name'])) {
echo $err['full_name'];
}
?>
<br>
<label>Email address *                                    </label><br>
<input type="text" name="email">
<br>
<?php
if (isset($err['email'])) {
echo $err['email'];
}
?>
<br>

<label>Username * </label><br>
<input type="text" name="username">
<br>
<?php
if (isset($err['username'])) {
echo $err['username'];
}
?>
<br>
<label>Password * </label><br>
<input type="password" name="password">
<br>
<?php
if (isset($err['password'])) {
echo $err['password'];
}
?>
<br>
<br>
<input type="submit" name="btnSubmit">
</fieldset>
</form>
</body>
</html>
```

Model Questions Sets for Practice

MODEL SET 1

Group A

Attempt all the questions.

1. Circle all the questions

i.   In Which PHP version Exception handling was added?

      a) PHP 5.1

      b) PHP 5.2

      c) PHP 5.3

      d) PHP 5

ii. What among the following is an appropriate event handler for input text among the below options?

      a) Onclick

      b) Onchange

      c) Onkeyup

      d) onblur

iii. What is WordPress?

      a) Framework

      b) CMS

      c) Programming Language

      d) Operating System

iv. A function name cannot start with a _____

      a) Alphabet

      b) Underscore

      c) **Number**

      d) Both C and B

v.   A function in PHP which starts with double underscore is known as _____.

      a) Magic Function

      b) Inbuilt Function

      c) Default Function

      d) User Defined Function

vi. Object are created using _____ keyword?

a) Create

b) Object

c) New

d) None of the above

vii. Which relational database is used into WordPress?
   a) MySQL
   b) Oracle
   c) PostgresSQL
   d) MSSQL Server

viii. Objects are defined as instances of use defined classes that can hold…………..?
   a) Values
   b) Functions
   c) Both values & functions
   d) None of these

ix. Foreach loop is iterate over ………..?
   a) Number
   b) String
   c) Array
   d) Function

x. What is the name of configuration file in WordPress?
   a) Header.php
   b) Wp-setting.php
   c) Wp-config.php
   d) Page.php

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. What is browser object model (BOM)? Describe BOM with it's properties and method

3. What is Ajax? Write code to display list of cities when user choose country from select box using PHP & AJAX.

4. What is JavaScript array? Describe date object with example.

5. What is session, Describe how session works when multiple user login into system at a same time?

6. What is WordPress? Write steps to create post in WordPress.

7. Describe how for loop and foreach loop works with array in PHP.

8. What is SQL injection? Describe how we prevent our website from SQL injection.

Group C

Attempt any TWO questions.   **[2×10 = 20]**

9. Write a program to lists and edit basic product information from ecommerce website using PHP?

10. What is Polymorphism? Describe how we can achieve polymorphism in PHP.

11. Difference between client side and server side scripting language? Describe different validation technique that can be used in order to make website secure with suitable example.

MODEL SET 2

Group A

1. Attempt all the questions. 10×1 = 10

Circle (O) the correct answer.

i. The script tag must be placed in,

a) head   b) head and body

c) title and head   d) All of the above

ii. The unordered collection of properties, each of which has a value is called?

a) String   b) Object

c) Serialized   d) All of the mentioned

iii. The basic purpose of the toLocalString() is to

a) return a localized object representation

b) return a local time in the string format

c) return a localized string representation of the object

d) return a parsed string

iv. Ajax stands for:

a) Abstract JSON and XML
          b) Asynchronous JavaScript and XML

c) Another Java Abstraction for X-Windows

d) Another Java and XML Library

v. JQuery code to set the background color of all span elements to blue?

a) $("span").style("background-color","blue")

b) $("span").manipulate("background-color","blue")

c) $("span").css("background-color","blue") __

d) $("span").color("background-color","blue")

vi. JQuery method is used to perform as asynchronous HTTP request?

a) JQuery.ajaxSetup()   b) JQuery.ajaxAsync()

c) JQuery.ajax()   d) JQuery.httpRequest()

vii. Which of the following characters   are   taken   care   of   by htmlspecialchars?

a) <   b) >   c) single quote   d) double quote

e) &   f) All of the above

viii. What is the output of the following code?

```
class test {
        public $value = 0;
        function test() {
                $this->value = 1;
        }
        function __construct() {
                $this->value = 2;
        }
}
$object = new test();
echo $object->value;
```

a) 2   b) 1   c) 0   d) 3   e) No Output, PHP will generate an error message.

ix. How would you store email (info@domain.com) in a 'userEmail' cookie in PHP?

a) setcookie ('userEmail','info@example.com')

b) storeCookie ('userEmail','info@example.com')

c) makeCookie ('userEmail','info@example.com')

d) window.cookie ('userEmail','info@example.com')

x.   Which keyword is used to put a stop on inheritance?

a) stop   b) end   c) break d) final

Attempt any SIX questions.   [6×5 = 30]

9. Write the code to add and remove elements into using JavaScript DOM.

10. What is Ajax? Write a script to check username availability into signup form.

11. What is JavaScript Object? Describe different properties and methods associated with windows object.

12. What is cookie, Describe how can we relate session with cookie?

13. What is CMS? Describe major features of CMS.

14. Describe how for loop and foreach loop works with array in PHP.

15. What is framework, Describe How MVC framework work in PHP?

Group C

Attempt any TWO questions.   [2×10 = 20]

12. Write a program to lists student information and delete those data from database using PHP?

13. What is Exception Handling? Describe 4 major principles of object oriented programming with PHP.

14. What is the need of client side scripting? Why need form validation into website, which validation is best among client side and server side validation describe with examples.

MODEL SET 3

Bachelor in Computer Applications
Course Title: Scripting Language
Code No: CACS 254
Semester: 4th
Symbol No:

Group A
1. **Attempt all the questions.**   10×1
    = 10
Circle (O) the correct answer.
    i. Which jQuery method is used to hide selected elements?

    a)   hidden()

    b)   hide()

c) visible(false)

d) display(none)

ii. Which built-in method returns the character at the specified index in JavaScript?
a) characterAt()
b) getCharAt()
c) charAt()
d) None of the above

iii. Which version of PHP introduced Try/catch Exception?

a) PHP 4

b) PHP 5

c) PHP 5.3

d) PHP 6

iv. Which function will return true if a variable is an array or false if it is not?
a) this_array()
b) is_array()
c) do_array()
d) in_array()

v. Which function can be used to move the pointer to the previous array position?
a) last()
b) before()
c) prev()
d) previous()

vi. If your object must inherit behavior from a number of sources you must use a/an
a) **Interface**
b) Object
c) Abstract class
d) Static class

vii. A conditional expression is also called a _____
a) Alternative to if-else
b) **Immediate if**
c) If-then-else statement
d) Switch statement

viii. What is a block statement in JavaScript?
   a) conditional block
   b) block that contains a single statement
   c) both conditional block and a single statement
   d) block that combines multiple statements into a single compound statement

ix. What will be the output of the following JavaScript code?

```
var a = 10;
do {
   a += 1;
   console.log (a);
} while (a < 5);
```

   a) 11121314
   b) 1112
   c) 12345
   d) 11

x. What is the name of the first page you encounter after logging into your web page?

   a) Dashboard

   b) Security question page

   c) WP upgrade option

   d) WPAdmin

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. Describe math object's properties and method with example.

3. What is Ajax? Write a script to check unique phone number into registration form.

4. What is regular expressions? Describe quantifiers and Meta character with example.

5. What is session? Describe how session works in PHP.

6. What is HTTP method? Difference between get and post method.

7. What is OOP? Describe advantage of OOP.

8. Write down steps to manage menu in WordPress.

Group C

Attempt any TWO questions.   **[2×10 = 20]**

9.   Write a server side script to validate following validate form with following field using JavaScript. Fields: Name, Email, Phone, Address and Gender.

10. Design following form in HTML and write corresponding PHP and SQL code to store the user's value after validating conditions:

   a. Username must be 8 character with alpha numeric value.

   b. Country must be selected.

   c. Gender must selected.

   d. Name must be filled up.

   e. User must click I accept term and condition to submit form.

11.   Difference between interface and abstract class. Describe inheritance with example.

19.   What is Exception Handling? Describe 4 major principles of object oriented programming with PHP.

20.   What is the need of client side scripting? Why need form validation into website, which validation is best among client side and server side validation describe with examples.

MODEL SET 4

Group A

1. Attempt all the questions.   **10×1 = 10**
Circle (O) the correct answer.

i.   The **localStorage** and **sessionStorage** belongs to _____
   a) **Window object**
   b) Element object
   c) Hash object
   d) DOM object

ii.   What is the observation made in the following JavaScript code?
   `var count = [1,,3];`

   a) **The omitted value takes "undefined"**
   b) This results in an error
   c) This results in an exception
   d) The omitted value takes an integer value

iii. What will happen if reverse () and join () methods are used simultaneously in JavaScript?
   a) Reverses and stores in the same array
   b) Reverses and concatenates the elements of the array
   c) Reverses
   d) Stores the elements of an array in normal order

iv. Which function will return true if a variable is an integer or false if it is not?
   a) this_integer()
   b) is_integer()
   c) is_int()
   d) isinteger()

v. Which method scope prevents a method from being overridden by a subclass?
   a)   Abstract
   b)   Protected
   c)   Final
   d)   Static

vi. PHP recognize constructor by the name
   a)   Classname()
   b)   _construct()
   c)   _constructor()
   d)   __construct()

vii. What are the steps you can take if your WordPress file is hacked?

   a)   Install security plugins like WP security
   b)   Re-install the latest version of WordPress
   c)   Change password and user-ids for all your users
   d)   All of the above

viii. Which in-built function will add a value to the end of an array?
   a)   array_unshift()
   b)   into_array()
   c)   inend_array()
   d)   array_push()

ix. Which is the example of CMS?
   a)   PHP
   b)   Joomala!!
   c)   Laravel
   d)   jQuery

x. Which one of the following PHP functions can be used to build a function that accepts any number of arguments?
   a)   func_get_argv()
   b)   func_get_argc()
   c)   get_argv()
   d)   get_argc()

Attempt any SIX questions. [6×5 = 30]

2. Describe string object's properties and method with example.

3. What is Ajax? Write down advantage and disadvantage of Ajax.

4. What is callback method? Why do we need callback method?

5. What is cookie? Describe difference between session and cookie.

6. What is the difference between window and document objects?

7. What is encapsulation? List down advantage of encapsulation.

8. Write down steps to manage menu in Joomla.

Group C

Attempt any TWO questions. [2×10 = 20]

9. What is event? Describe event handler with appropriate example to manipulate DOM objects'.

10. Write PHP and SQL code to list the data from database table named 'tbl_books' into following format.

SN	Name	ISBN	Price
1	Scripting	45454-545	450
2	Numerical Method	66678-855	550
3	Operating System	4578-5222	350

11. What is Inheritance? Describe different types of inheritance in PHP.

MODEL SET 5

Group A

1. Attempt all the questions. 10×1 = 10
Circle (O) the correct answer.

i. The Client-Side Databases are stored in the _____
   a) The JavaScript code
   b) **User's computer**
   c) Both JavaScript code and User's computer
   d) In the server

ii. Is jQuery a library for client scripting or server scripting
   a) **Client scripting**
   b) Server scripting
   c) Both of above
   d) None

iii. Which function will return true if a variable is a resource or false if it is not?
   a) this_resource()
   b) **is_resource()**
   c) in_resource()
   d) isresource()

iv. Which of following is not allowed to create object?
   e) **Abstract class**
   f) Child class
   g) Parent class
   h) Static class

v. PHP recognize destructor by the name
   a) _Classname()
   b) _destructor()
   c) _destructure()
   d) **__destruct()**

vi. What is the default admin login URL for WordPress website?

   a) wordpress-admin
   b) **wp-admin**
   c) Admin-login
   d) Site-login

vii. Which in-built function will add a value at end of an array?
   a) add_last()
   b) into_array()
   c) inend_array()
   d) **array_push()**

viii. What is the full AJAX?
   a) **Asynchronous JavaScript and XML**
   b) Anonymous JavaScript and XML
   c) Analog JavaScript and XML
   d) Extensible JavaScript and XML.

ix. Which of them is not the looping structures in JavaScript?
   a) for
   b) while
   c) dowhile
   d) **dowhich**

x. Which of the following is not the properties of screen objects in JavaScript?
   a) AvailHeight

    b) ColorsDepth
    c) AvailWidth
    d) ColorDepth

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. Describe JavaScript coding convention with example

3. Write a JavaScript code to store and retrieve cookie.

4. Describe is AMPP with example.

5. Difference between numeric & associative array.

6. Describe file inclusion in PHP? Differentiate between require and include function.

7. Describe error handling mechanism in PHP?

8. What is extensions? Describe use of Joomla extensions

Group C

Attempt any TWO questions.   **[2×10 = 20]**

9. Describe different JavaScript method and properties associated into form validation with proper example.

10. Write PHP and SQL code to update and delete following data from database table named 'tbl_books'.

SN	Name	ISBN	Price
1	Software engineering	45454-5459	455
2	Project I	66678-8559	378
3	Database Management System	4578-52229	650

11. What is inheritance? Describe how multiple inheritance can be achieve in PHP with proper example.

Group A

1. Attempt all the questions.   **10×1 = 10**
Circle (O) the correct answer.
i. Which of the following is not one of the five types of extensions for Joomla?
    a) Plugins
    b) Templates

c) Modules
d) **Media**

ii. What does MVC stand for?
    a) **Model View Controller**
    b) Most Viewed Controller
    c) Media View Content
    d) Media Video Content

iii. In which programming language WordPress is written?
    a) Java
    b) Node
    c) **PHP**
    d) JavaScript

iv. Which operator is known as the strict equality operator, which checks whether its two operands are identical or not?
    a) =
    b) ==
    c) **===**
    d) &&

v. What is throw block do?
    a) It represent block of code in which exception can arise.
    b) It is used in place of catch block or after catch block.
    c) **It is used to throw an exception.**
    d) None of the above

vi. By default, the index of array in PHP starts from _____?
    a) **0**
    b) 1
    c) -1
    d) 2

vii. foreach loop is used to iterate over ____?
    a) number
    b) object
    c) function
    d) **array**

viii. The script that executes at the browser side is called _____
    a) **Client side scripting**
    b) Server side scripting
    c) Both A and B
    d) None of the above

ix. Which is the handler method used to invoke when uncaught JavaScript exceptions occur?
    a) Onhalt
    b) **Onerror**
    c) Both onhalt and onerror
    d) Onsuspend

X. Who among this is the founder of php language?
   a) Tim Berners-Lee
   b) Brendan Eich
   c) Guido van Rossum
   d) Rasmus Lerdorf

Group B

Attempt any SIX questions.   **[6×5 = 30]**

2. Describe JavaScript coding convention with example

3. Write a JavaScript code to store and retrieve cookie.

4. Describe is AMPP with example.

5. Difference between numeric & associative array.

6. Describe file inclusion in PHP? Differentiate between require and include function.

7. Describe error handling mechanism in PHP?

8. What is extensions? Describe use of Joomla extensions

Group C

Attempt any TWO questions.   **[2×10 = 20]**

9. Write JavaScript code to validate following details.

   a. Username is required field and minimum 8 character.

   b. Phone number must be 10 digit.

   c. Age is required field and value must in be between 16-50 years.

   d. And email must be in format.

10. Write PHP script to display name, roll_no, email, course of student into webpage with and also delete these record using roll_no of student.

11. What is CMS? Describe advantage and disadvantage of CMS. Describe steps to create menu in WordPress.

Group A
1.   Attempt all the questions.   **10×1 = 10**
Circle (O) the correct answer.
i. Which of the following is not JavaScript Data Types?
   a) Undefined

b) Number
c) Boolean
d) Float

ii. In which programming language Joomla!! Is written?
a) .NET
b) Python
c) NodeJS
d) PHP

iii. Which operator is known as conditional operator?
a) ==
b) >=
c) <=
d) ?:

iv. Exception handling is used to handle?
a) Compile error.
b) **Runtime Error.**
c) Syntax Error.
d) Parse Error.

v. PHP associative array consists of following format;
a) $array[0] = value;
b) $array->value;
c) $array:: value;
d) $array['key'] = value;

vi. While loop is known as ……….. loop?
a) If condition loop
b) Entry control
c) Exit control loop
d) Final control loop

vii. Which company developed JavaScript?
a) Netscape
b) IBM
c) Bell labs
d) Microsoft

viii. What will be the output of divide by 0 in JavaScript?
a) Noting will print.
b) 0 is printed
c) Infinity is printed
d) Some garbage value

ix. Who How many ways user can print output in PHP?
a) 1
b) 2
c) 3
d) 4

X. How Function parses an English textual date or time into a Unix timestamp
   a) strtodate()
   b) stroftime()
   c) strtotime()
   d) str_to_time()

Group B

Attempt any SIX questions.   **[6×5 = 30]**

9. What is exception handling? Describe exception handling in JavaScript

10. Describe use of ForEach loop in JavaScript.

11. Describe DOM with it's properties and method.

12. What is super global variable? Describe various super global variable in PHP.

13. What is use of ForEach loop in PHP? Describe with example.

14. Describe date function with different format specifier?

15. What is AJAX? Describe different method of implementing AJAX in PHP.

Group C

Attempt any TWO questions.   **[2×10 = 20]**

12. Write JavaScript code to validate following details.

   a. Name is required field.

   b. Password and confirm password, required and must match.

   c. Country must be selected from select box.

   d. User must accept term and condition to process form data.

13. Write PHP script to update restaurant menu having menu_code 'FCHN-895' with following details: Food name, price, unit, description, and image.

14. What is MVC framework? Differentiate framework with CMS. Describe how MVC framework works.

Group A

2. Attempt all the questions.   10×1 = 10
Circle (O) the correct answer.

i. What is the output of following JavaScript?

```
var a = 'ram';
```

```
var b = 'kumar';
var c = a/b;
document.write(c);
```

   xi. ramkumar

   xii. ram/kumar

xiii.   **NaN**

   xiv.None of the aboveIn

ii. What is the output of below JavaScript code?

```
alert (typeof new Date() );
```

      a) Throws Error
      b) object
      c) Displays Nothing
      d) Current Date

iii. Which operator is known as identical equal operator?

      a) ===
      b) ==
      c) <=
      d) ?:

iv. What is throw block do?

      a) It represent block of code in which exception can arise.
      b) It is used in place of catch block or after catch block.
      c) It is used to throw an exception.
      d) None of the above

V. Which of the following classes cannot be instantiated?

      a) Public class
      b) Private Class
      c) Abstract Class
      d) Final Class

vi. Which is the code that asks for the set of all div elements in a document?

      a) var divs = $(div);
      b) var divs = $("*div");
      c) var divs = $("#div");
      d) var divs = $("div");

vii. Which of the following is used to maintain the value of a variable over different pages?
- a) Static
- b) global
- c) session
- d) None of the above

viii. What will be the output of divide by 0 in JavaScript?
- a) Noting will print.
- b) 0 is printed
- **c) Infinity is printed**
- d) Some garbage value

ix. The inbuilt function to get number of parameters passed is:
- a) arg_num()
- b) func_args_count()
- c) func_num_args()
- d) None of the above

x. Which of the following attribute is needed for file upload via form?
- a) enctype='multipart/form-data'
- b) enctype='singlepart/data'
- c) enctype='file'
- d) enctype='form-data/file'

Group B

Attempt any SIX questions.   **[6×5 = 30]**

12. What is DOM? Describe DOM properties and method with example.

13. What is Ajax? Write code to check if phone is available or not into registration form using Ajax?

14. Describe properties and method of string object in JavaScript.

15. What is session, Describe how session works with example?

16. What is jQuery? Describe any 5 jQuery function with example.

17. Write a PHP program to print following list using array and loop.

- e. Scripting Language
- f. Software Engineering
- g. Numerical Method
- h. Operating System

18. Write a PHP program to upload file in PHP with type's png, jpg and gif.

Group C

Attempt any TWO questions.   **[2×10 = 20]**

19. Write a program to select list of food record from restaurant database with name, price, ingredient and remarks column and display into html table.
20. What is Inheritance? What is advantage of inheritance? Describe we can achieve multiple inheritance in PHP.
21. Why we need to perform validation in both client and server side? Validate registration form with name, email, age, phone and website with required and it's related type validation