



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION
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SUMMER – 2023 EXAMINATION
MODEL ANSWER-Only for the Use of RAC Assessors

Subject: Web Based Application Development Using PHP (Elect-II)

Subject Code: 22619

Important Instructions to examiners:

- 1) The answers should be examined by key words and not as word-to-word as given in the model answer scheme.
- 2) The model answer and the answer written by candidate may vary but the examiner may try to assess the understanding level of the candidate.
- 3) The language errors such as grammatical, spelling errors should not be given more Importance (Not applicable for subject English and Communication Skills).
- 4) While assessing figures, examiner may give credit for principal components indicated in the figure. The figures drawn by candidate and model answer may vary. The examiner may give credit for any equivalent figure drawn.
- 5) Credits may be given step wise for numerical problems. In some cases, the assumed constant values may vary and there may be some difference in the candidate's answers and model answer.
- 6) In case of some questions credit may be given by judgement on part of examiner of relevant answer based on candidate's understanding.
- 7) For programming language papers, credit may be given to any other program based on equivalent concept.
- 8) As per the policy decision of Maharashtra State Government, teaching in English/Marathi and Bilingual (English + Marathi) medium is introduced at first year of AICTE diploma Programme from academic year 2021-2022. Hence if the students in first year (first and second semesters) write answers in Marathi or bilingual language (English +Marathi), the Examiner shall consider the same and assess the answer based on matching of concepts with model answer.

Q.No	Sub Q.N.	Answer	Marking Scheme
1.	a) Ans.	<p>Attempt any <u>FIVE</u> of the following:</p> <p>State the advantages of PHP(any four)</p> <p>The advantages of PHP are as follows:</p> <p>1. Open Source and Free of Cost: People can download it from an open-source and get it for free.</p> <p>2. Platform Independence: PHP-based applications can run on any OS such as UNIX, Windows, Linux, etc.</p> <p>3. Database connection: It has a built-in database connection that helps to connect databases and reduce the trouble and the time to develop web applications or content-based sites altogether.</p> <p>4. Library support: PHP has strong library support using which one can utilize the various function modules for data representation.</p>	<p>10M 2M <i>State any four advantages</i> <i>1/2M each</i></p>



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		<p>5. User-friendly: It has a less learning curve, and one can learn it quickly.</p> <p>6. Flexible: It is highly flexible, and people can readily use it to combine its function with various other programming languages.</p> <p>7. PHP uses its own memory space, so the workload of the server and loading time reduces automatically, which results into the faster processing speed.</p> <p>8. PHP has multiple layers of security to prevent threats and malicious attacks.</p>	
	b) Ans.	<p>State the use of strlen() and strrev()</p> <p>Strlen(): The strlen() function is used to count number of characters in a string. It returns the length of a string.</p> <p>Strrev(): The strrev() function is used to reverse a string.</p>	<p>2M <i>Use of each method- 1M</i></p>
	c) Ans.	<p>Define introspection</p> <p>Introspection is the ability of a program to examine object characteristics such as its name, parent class, properties and method.</p>	<p>2M <i>Correct definition 2M</i></p>
	d) Ans.	<p>Enlist the attributes of cookies.</p> <p>Attributes of Cookies are as follows:</p> <ol style="list-style-type: none">1. name2. value3. expire4. path5. domain6. secure	<p>2M <i>List any four attributes 1/2M each</i></p>
	e) Ans.	<p>Write syntax of constructing PHP webpage with MySQL Using MySQLi object-oriented procedure:</p> <p>Syntax:</p> <pre><?php \$servername = "localhost"; \$username = "username"; \$password = "password"; // Creating connection \$conn = new mysqli(\$servername, \$username, \$password); // Checking connection</pre>	<p>2M <i>Correct syntax 2M</i></p>



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	<pre>if (\$conn->connect_error) { die("Connection failed: " . \$conn->connect_error); } echo "Connected successfully"; ?></pre> <p>OR</p> <p>Using MySQLi procedural procedure :</p> <p>Syntax:</p> <pre><?php \$servername = "localhost"; \$username = "username"; \$password = "password"; // Creating connection \$conn = mysqli_connect(\$servername, \$username, \$password); // Checking connection if (!\$conn) { die("Connection failed: " . mysqli_connect_error()); } echo "Connected successfully"; ?></pre> <p><i>Note: Any one relevant syntax shall be considered</i></p>	
f) Ans.	<p>Define GET & POST methods</p> <p>GET method:</p> <p>GET method is a way to pass data entered in a form, to the server or destination by adding it into URL.</p> <p>OR</p> <p>It processes the client request which is sent by the client, using the HTTP get method. Browser uses get method to send request.</p> <p>POST method:</p> <p>POST method is a way to pass data entered in form to the server securely without adding it to URL.</p> <p>OR</p> <p>It Handles request in servlet which is sent by the client. If a client is entering registration data in an html form, the data can be sent using post method.</p>	2M <i>Each definition 1M</i>



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	g) Ans.	State the use of “\$” sign in PHP \$ sign in PHP is used to indicate a variable. A variable starts with the \$ sign, followed by the name of the variable. Example: \$a=10	2M <i>Correct use 2M</i>
2.	a) Ans.	Attempt any <u>THREE</u> of the following: Write a program using do-while loop. <pre><?php \$n=1; do{ echo "\$n
"; \$n++; }while(\$n<=10); ?></pre> <i>Note: Any other relevant program shall be considered</i>	12M 4M <i>Correct program 4M</i>
	b) Ans.	Explain associative and multi dimensional arrays Associative Arrays The associative arrays are very similar to numeric arrays in term of functionality but they are different in terms of their index. Associative array will have their index as string so that you can establish a strong association between key and values. Example <pre><?php \$salaries = array("mohammad" => 2000, "Dinesh" => 1000, "Surabhi" => 500); echo "Salary of Arjun is ". \$salaries['Arjun'] . "
"; echo "Salary of Dinesh is ". \$salaries['Dinesh']. "
"; echo "Salary of Surabhi is ". \$salaries['Surabhi']. "
"; echo "<pre>"; print_r(\$salaries); echo "</pre>"; ?></pre>	4M <i>Explanation of each 2M</i>



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	<p>Multidimensional Arrays</p> <p>In multi-dimensional array, each element in the main array can also be an array. A multidimensional array is an array containing one or more arrays. It has more than one dimension in the form of rows and columns. Values in the multi-dimensional array are accessed using multiple indexes.</p> <p>Example:</p> <p>In this example we create a two dimensional array to store marks of three students in three subjects:</p> <pre><?php \$marks = array("Arjun" => array ("physics" => 35, "maths" => 30, "chemistry" => 39), "Dinesh" => array ("physics" => 30, "maths" => 32, "chemistry" => 29), "Surabhi" => array ("physics" => 31, "maths" => 22, "chemistry" => 39)); /* Accessing multi-dimensional array values */ echo "Marks for Arjun in physics : " ; echo \$marks['Arjun']['physics'] . "
"; echo "Marks for Dinesh in maths : "; echo \$marks['Dinesh']['maths'] . "
"; echo "Marks for Surabhi in chemistry : " ; echo \$marks['Surabhi']['chemistry'] . "
"; echo "<pre>"; print_r(\$marks); echo "</pre>"; ?></pre> <p>OR</p> <pre>\$cars = array (array("Volvo",22,18), array("BMW",15,13), array("Ciaaz",10,15)); OR \$row0 = array("Volvo",22,18); \$row1 = array("BMW",15,13); \$row2 = array("Ciaaz",10,15);</pre>	
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		<code>\$cars = array(\$row0, \$row1, \$row2);</code> <i>Note: Any other relevant example shall be considered</i>	
	c) Ans.	Define serialization and explain it with example Definition: The serialize() function converts a storable representation of a value. To serialize data means to convert a value to a sequence of bits, so that it can be stored in a file, a memory buffer, or transmitted across a network. Syntax <code>serialize(value);</code> Example: <code><?php \$data = serialize(array("Red", "Green", 4044)); echo \$data; ?></code> Output: <code>a:3:{i:0;s:3:"Red";i:1;s:5:"Green";i:2;i:4044;}</code>	4M <i>Correct definition 2M And any suitable example 2M</i>
	d) Ans.	Describe the procedure of sending email. 1. PHP mail is the built-in PHP function that is used to send emails from PHP scripts. 2. The mail function accepts the following parameters; a) Email address b) Subject c) Message d) CC or BCC email addresses 3. The PHP mail function has the following basic syntax <code><?php mail(\$to_email_address,\$subject,\$message,[\$headers],[\$parameters]); ?></code> HERE, a) “\$to_email_address” is the email address of the mail recipient b) “\$subject” is the email subject c) “\$message” is the message to be sent. d) “[\$headers]” is optional, it can be used to include information such as CC, BCC • CC is the acronym for carbon copy. It’s used when you want to send a copy to an interested person i.e. a complaint email sent to a company can also be sent as CC to the complaints board.	4M <i>Correct procedure 4M</i>



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		<ul style="list-style-type: none">• BCC is the acronym for blind carbon copy. It is similar to CC. The email addresses included in the BCC section will not be shown to the other recipients. <p>4. PHP mailer uses Simple Mail Transmission Protocol (SMTP) to send mail. On a hosted server, the SMTP settings would have already been set. The SMTP mail settings can be configured from “php.ini” & “sendmail.ini” file in the PHP installation folder.</p> <p>Php Mail Example</p> <pre><?php \$to_email = 'name @ company . com'; \$subject = 'Testing PHP Mail'; \$message = 'This mail is sent using the PHP mail function'; \$headers = 'From: noreply @ company . com'; mail(\$to_email,\$subject,\$message,\$headers); ?></pre>													
3.	a) Ans.	<p>Attempt any THREE of the following:</p> <p>Differentiate between implode and explode functions.</p> <table><tr><th>Implode function</th><th>Explode function</th></tr><tr><td>The implode function works on an array.</td><td>The explode function works on a string.</td></tr><tr><td>The implode function returns string.</td><td>The explode function returns array.</td></tr><tr><td>The first parameter of the implode function is optional.</td><td>The first parameter of the explode function is required.</td></tr><tr><td>Syntax: string implode(string \$seperator, array \$array)</td><td>Syntax: array explode(string separator,string string)</td></tr><tr><td>Example: <?php \$arr = array('CO','IF','EJ'); \$str = implode(" ",\$arr); echo \$str; ?></td><td>Example: <?php \$str = "CO-IF-EJ"; \$arr = implode("-", \$str); print_r(\$arr); ?></td></tr></table>	Implode function	Explode function	The implode function works on an array.	The explode function works on a string.	The implode function returns string.	The explode function returns array.	The first parameter of the implode function is optional.	The first parameter of the explode function is required.	Syntax: string implode(string \$seperator, array \$array)	Syntax: array explode(string separator,string string)	Example: <?php \$arr = array('CO','IF','EJ'); \$str = implode(" ",\$arr); echo \$str; ?>	Example: <?php \$str = "CO-IF-EJ"; \$arr = implode("-", \$str); print_r(\$arr); ?>	<p>12M 4M</p> <p><i>Any 4 correct points-1M each</i></p>
Implode function	Explode function														
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b) Ans.	<p>Explain the concept of cloning of an object</p> <ul style="list-style-type: none">• The clone keyword is used in PHP's to copy object.• does a shallow copy and so, any changes made in the cloned object will not affect the original object.• __clone is a magic method in PHP. Magic methods are predefined in PHP and start with “__” (double underscore). They are executed in response to some events in PHP. <p>Example:</p> <pre><?php // Creating instance of Animals class \$objAnimals = new Animals(); // Assigning values \$objAnimals->name = "Lion"; \$objAnimals->category = "Wild Animal"; // Cloning the original object \$objCloned = clone \$objAnimals; \$objCloned->name = "Elephant"; \$objCloned->category = "Wild Animal"; print_r(\$objAnimals); print_r(\$objCloned); ?></pre>	<p>4M</p> <p><i>Explanation</i> 2M</p> <p><i>Example</i> 2M</p>
c) Ans.	<p>Describe the procedure of validation of web page</p> <p>Validating a web page in PHP involves checking the input data provided by users to ensure that it meets the required criteria and is safe for further processing. Here's a general procedure for validating a web page in PHP:</p> <p>The procedure of validation of web page.</p> <p>Define the Validation Rules: Determine the validation rules for each input field on the web page. This includes constraints such as required fields, data formats (e.g., email, date), length limits, and any specific patterns or restrictions.</p> <p>Create the HTML Form: Design and create the HTML form that collects user input. Specify the appropriate input types, such as text, email, number, etc., and include any necessary attributes like required or pattern.</p>	<p>4M</p> <p><i>Explanation</i> 3M</p> <p><i>Example</i> 1M</p>



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	<p>Submitting the Form: Set up the PHP script that processes the form submission. This script will be responsible for handling the validation and processing the data. Ensure that the form's method attribute is set to "POST" so that the data is sent securely.</p> <p>Retrieve and Sanitize Input: In the PHP script, retrieve the submitted data using the \$_POST superglobal array. Sanitize the input to remove any unwanted characters or tags that could potentially pose security risks. You can use functions like htmlspecialchars or filter_input to sanitize specific inputs.</p> <p>Perform Validation: Apply the validation rules defined in Step 1 to each input field. Use PHP's conditional statements, loops, and regular expressions to check if the input data meets the required criteria. For example, you can use if statements and regular expressions to validate email addresses, check for empty fields, or validate numeric values.</p> <p>Display Validation Errors: If any input fails validation, store the error messages in an array or variable. Display these error messages next to the corresponding input fields on the web page, informing the user about the specific validation issues they need to address.</p> <p>Process Valid Data: If all the input data passes validation, proceed with further processing, such as storing the data in a database, sending emails, or performing other necessary operations.</p> <p>Redisplay Form with Pre-filled Data: If there are validation errors, redisplay the form with the user's previously submitted data already filled in. This provides a better user experience and allows users to correct the invalid fields without re-entering all the data.</p> <p>Example:</p> <pre>if(\$_SERVER["REQUEST_METHOD"] == "POST"){ // Validate name if(empty(trim(\$_POST["name"])))}</pre>	
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		<pre>\$name_err = "Please enter your name."; } else{ \$name = trim(\$_POST["name"]); } }</pre>	
d) Ans.	<p>Write update and delete operations on table data</p> <p>Update operations:</p> <ul style="list-style-type: none">• The UPDATE statement is used to change or modify the existing records in a database table.• SQL query will be formed using the UPDATE statement and WHERE clause, after that a query will be executed by passing it to the PHPquery() function to update the tables records. <p><u>Example:</u></p> <p>The percentage of roll no. C101 will be updated to '98.99' from student table by using UPDATE statement_</p> <pre><?php require_once 'login.php'; \$conn = new mysqli(\$hn, \$un, \$pw, \$db); if (\$conn->connect_error) die(\$conn->connect_error); \$query = "UPDATE student SET percent=98.99 WHERE rollno='CO101'"; \$result = \$conn->query(\$query); if (!\$result) die ("Database access failed: " . \$conn->error); ?></pre> <p>Delete operation:</p> <ul style="list-style-type: none">• Records can be deleted from a table using the SQL DELETE statement.• SQL query is formed using the DELETE statement and WHERE clause, after that will be executed by passing this query to the PHP query() function to delete the tables records.• For example a student record with a roll no. 'CO103' will be deleted by using DELETE statement and WHERE clause. <pre><?php require_once 'login.php'; \$conn = new mysqli(\$hn, \$un, \$pw, \$db);</pre>	<p>4M</p> <p><i>Correct operation statement 2M each</i></p>	



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		<pre>if (\$conn->connect_error) die(\$conn->connect_error); \$query = "DELETE from student WHERE rollno='CO103'"; \$result = \$conn->query(\$query); if (!\$result) die ("Database access failed: " . \$conn->error); ?></pre>	
4.	<p>a) Ans.</p>	<p>Attempt any <u>THREE</u> of the following:</p> <p>State user defined functions and explain it with example.</p> <p>A function is a named block of code that performs a specific task.PHP supports user defined functions, where user can define his own functions. A function doesn't execute when its defined, it executes when it is called.</p> <p>The syntax to create a PHP user defined function –</p> <p>A PHP user-defined function declaration starts with the keyword function as shown below –</p> <pre>function funName(\$arg1, \$arg2, ... \$argn) { // code to be executed inside a function //return \$val }</pre> <p>The syntax to call a PHP user-defined function –</p> <pre>\$ret=funName(\$arg1, \$arg2, ... \$argn);</pre> <p>Example:</p> <pre><?php // user-defined function definition function printMessage(){ echo "Hello, How are you?"; } //user-defined function call printMessage(); ?></pre> <p>As in the above program, the printMessage() function is created using the keyword function. The function prints the message “Hello, How are you?”. So, farther in the program when it is calling the function as “printMessage();”. It prints a message, as we can see in the above output.</p>	<p style="text-align: center;">12M 4M</p> <p style="text-align: center;"><i>Correct explanation - 2M</i></p> <p style="text-align: center;"><i>Any correct Example-2M</i></p>



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	b) Ans.	<p>Describe inheritance, overloading, overriding and cloning object.</p> <p>Inheritance allows classes to inherit properties and methods from a parent class, overloading provides dynamic property and method handling, overriding enables customization of inherited methods, and cloning creates copies of objects.</p> <p>1. Inheritance: Inheritance is a fundamental concept in object-oriented programming that allows classes to inherit properties and methods from another class. In PHP, we can define a new class by extending an existing class using the extends keyword. The new class is called the child or derived class, and the existing class is called the parent or base class. The child class inherits all the public and protected properties and methods of the parent class. It can also add its own properties and methods or override the parent class's methods.</p> <p>2. Overloading: In PHP, overloading refers to the ability to dynamically create properties and methods in a class at runtime. There are two types of overloading:</p> <p>a. Property Overloading: PHP provides the __set() and __get() magic methods to handle property overloading. When a property is accessed or modified that doesn't exist or is inaccessible within the class, these methods are called, allowing us to define custom logic for handling the property.</p> <p>b. Method Overloading: PHP doesn't support method overloading in the traditional sense (having multiple methods with the same name but different parameters). However, we can use the __call() magic method to handle method overloading. It gets called when a non-existent or inaccessible method is invoked, giving the flexibility to handle the method dynamically.</p> <p>3. Overriding: Overriding occurs when a child class provides its own implementation of a method that is already defined in the parent class. The method signature (name and parameters) in the child class must match that of the parent class. By overriding a method, we can customize the behaviour of the method in the child class while retaining the same method name. To override a method in PHP, simply declare the method in the child class with the same name as the parent class's method.</p>	4M <i>Each term description 1M</i>
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	<p>4. Cloning Objects: Cloning an object in PHP allows us to create a duplicate of an existing object. The clone is a separate instance of the class, but its properties will initially have the same values as the original object. In PHP, we can clone an object using the clone keyword followed by the object you want to clone. The cloning process involves calling the __clone() magic method if it's defined in the class. This method allows us to customize the cloning process by modifying the properties of the cloned object if necessary.</p>	
<p>c) Ans.</p>	<p>Explain web server role in web development The web server's role in PHP web development as shown below:</p>  <pre>graph LR Browser[Browser] -- Request --> WebServer[Web Server] WebServer -- Response --> Browser WebServer -- Call --> PHPInterpreter[PHP Interpreter] PHPInterpreter -- Output --> WebServer</pre> <p>1. HTTP Request Handling: When a user accesses a PHP-based web application, their browser sends an HTTP request to the web server. The web server receives this request and determines how to handle it based on the requested URL and the HTTP method used (e.g., GET, POST). The server is responsible for routing the request to the appropriate PHP script or file for processing.</p> <p>2. PHP Script Execution: Once the web server receives an HTTP request that requires PHP processing, it passes the request to the PHP interpreter or engine. The PHP interpreter executes the PHP code contained within the requested file or script. It processes the logic, interacts with databases, performs computations, and generates dynamic HTML or other types of content.</p> <p>3. Server-Side Processing: PHP is a server-side scripting language, meaning the PHP code is executed on the server before the resulting HTML or other output is sent back to the client's browser. The web server runs the PHP script in its environment and provides necessary resources like database connections, file access, and session management.</p> <p>4. Integration with Other Technologies: In addition to executing PHP code, the web server may also be responsible for integrating with other technologies commonly used in web development. For example, the web</p>	<p>4M <i>Any relevant Diagram 1M</i> <i>Explanation 3M</i></p>



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		<p>server can handle requests for static files like CSS, JavaScript, and images, delivering them directly to the client without involving PHP processing. It can also handle URL rewriting or redirection for search engine optimization (SEO) purposes or to create user-friendly URLs.</p> <p>5. Content Delivery: Once the PHP script execution is complete, the web server sends the generated content (usually HTML) back to the client's browser as an HTTP response. The server sets the appropriate headers, such as Content-Type, Content-Length, and caching directives, to ensure the correct interpretation and rendering of the response by the client.</p> <p>6. Error Handling and Logging: The web server is responsible for handling errors and logging relevant information. If an error occurs during PHP script execution, the web server can be configured to display an error message or redirect to a custom error page. It also logs information about requests, errors, and server events, which can be helpful for debugging, monitoring, and performance analysis.</p>	
	<p>d) Ans.</p>	<p>Explain inserting & Retrieving the query result operations.</p> <p>Insert operation:</p> <p>Data can be inserted into an existing database table with an INSERT INTO query.SQL query using the INSERT INTO statement with appropriate values, after that we will execute this insert query through passing it to the PHP query() function to insert data in table.</p> <p>For example a student data is inserted into a table using INSERT INTO statement.</p> <pre><?php require_once 'login.php'; \$conn = new mysqli(\$hn, \$un, \$pw, \$db); if (\$conn->connect_error) die(\$conn->connect_error); \$query = "INSERT INTO student(rollno,name,percent) VALUES ('CO103','Reena Patel',98.45)"; \$result = \$conn->query(\$query); if (!\$result) die ("Database access failed: " . \$conn->error); ?></pre>	<p style="text-align: center;">4M</p> <p><i>Insertion with example- 2M</i></p> <p><i>Retrieving with example-2M</i></p>



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		<p>Retrieving operation:</p> <p>The data can be retrieved from the table using SQL SELECT statement which is used to select the records from database tables.</p> <p>SQL query using the SELECT statement will be executed by passing this SQL query to the PHP query() function to retrieve the table data.</p> <p>For example data from the student table can be executed by using the SELECT statement.</p> <pre>select_sample.php <?php require_once 'login.php'; \$conn = new mysqli(\$hn, \$un, \$pw, \$db); if (\$conn->connect_error) die(\$conn->connect_error); \$query = "SELECT * FROM student"; \$result = \$conn->query(\$query); if (!\$result) die ("Database access failed: " . \$conn->error); \$rows = \$result->num_rows; echo "<table border='1'><tr><th>RollNo.</th><th>Name</th><th>Percentage</th></tr>"; for (\$j = 0 ; \$j < \$rows ; ++\$j) { \$result->data_seek(\$j); \$row = \$result->fetch_array(MYSQLI_NUM); echo "<tr>"; for (\$k = 0 ; \$k < 3 ; ++\$k) echo "<td>\$row[\$k]</td>"; echo "</tr>"; } echo "</table>"; ?></pre>	
	<p>e) Ans.</p>	<p>Create a web page using GUI components</p> <pre><!DOCTYPE html> <html> <head> <title>Registration form</title> <link rel="stylesheet" href="style1.css" type="text/css"> </head></pre>	<p style="text-align: center;">4M</p> <p style="text-align: center;"><i>Correct syntax of any four GUI components</i></p> <p style="text-align: center;"><i>1M for each component</i></p>



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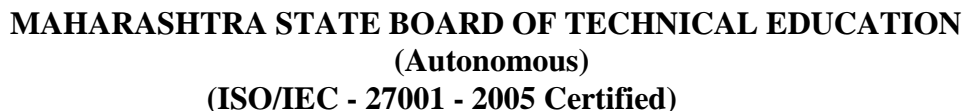
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		<pre></div><!-----end of main----> </body> </html></pre>	
5.	<p>a) Ans.</p>	<p>Attempt any TWO of the following Implement any three data types used in PHP with illustration Data Types : PHP provides eight types of values, or data types: Four are scalar (single-value) types: integers, floating-point numbers, strings, and Booleans. Two are compound (collection) types: arrays and objects. Two are special types: resource and NULL.</p> <p><u>Integers:</u> Integers are whole numbers, such as 1, 12, and 256. Integer literals can be written in decimal, octal, or hexadecimal. Example : Decimal 1998 , -641 , +33 Octal 0755 // decimal 493 , 010 // decimal 8 Hexadecimal 0xFF // decimal 255 , 0x10 // decimal 16 , -0xDAD1 // decimal -56017 Binary numbers begin with 0b, followed by a sequence of digits (0 and 1). Like other values, you can include a sign in binary numbers: 0b01100000 // decimal 1 , 0b00000010 // decimal 2</p> <p><u>Floating-Point Numbers:</u> Floating-point numbers (often referred to as real numbers) represent numeric values with decimal digits. This allows numbers between 1.7E-308 and 1.7E+308 with 15 digits of accuracy. PHP recognizes floating-point numbers written in two different formats. General format : 3.14 , 0.017 , -7.1 Scientific format: 0.314E1 // 0.314*10^1, or 3.14 , 17.0E-3 // 17.0*10^(-3), or 0.017 Floating-point values are only approximate representations of numbers. For example, on many systems 3.5 is actually represented as 3.4999999999. <u>Strings:</u> As strings are very common in web applications, PHP includes core-level support for creating and manipulating strings. A string is a sequence of characters of arbitrary length. String literals are delimited by either single or double quotes: 'big dog' or "fat hog" . Example: \$no=10; \$str1=" My roll number is \$no" echo \$str1;</p>	<p>12M 6M</p> <p><i>Implementation / example of any three data types -2Meach</i></p>



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	<p><u>Booleans</u> :A Boolean value represents either true(1) or false(0). Boolean values are often used in conditional testing. Example: \$var=TRUE;</p> <p><u>Arrays</u> :An array holds a group of values, which you can identify by position (a number, with zero being the first position) or some identifying name (a string), called an associative index. Example: The array() construct creates an array. \$person = array("Edison", "Wankel", "Crapper"); \$creator = array('Light bulb' =>"Edison", 'Rotary Engine' =>"Wankel", 'Toilet' =>"Crapper");</p> <p><u>Objects</u> :Classes are the building blocks of object-oriented design. A class is a definition of a structure that contains properties (variables) and methods (functions). Once a class is defined, any number of objects can be made from it with the new keyword, and the object's properties and methods can be accessed with the -> construct: \$ed = new Person; \$ed->name('Edison');</p> <p><u>Resource</u> :Many modules provide several functions for dealing with the outside world. For example, every database extension has at least a function to connect to the database, a function to send a query to the database, and a function to close the connection to the database. Example :\$res = database_connect(); database_query(\$res);</p> <p><u>NULL</u> :The NULL value represents a variable that has no value. Example: \$aleph = NULL;</p>	
b) Ans.	<p>Write a program to connect PHP with MySQL</p> <p>Solution1: <?php \$servername = "localhost"; \$username = "root"; \$password = ""; // Connection \$conn = new mysqli(\$servername,\$username, \$password);</p>	<p style="text-align: center;">6M</p> <p style="text-align: center;"><i>Correct logic</i> 3M</p> <p style="text-align: center;"><i>Correct syntax</i> 3M</p>



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```
// For checking if connection issuccessful or not
if ($conn->connect_error)
{
    die("Connection failed: ". $conn->connect_error);
}
echo "Connected successfully";
?>
```

OR

Solution2:

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$conn = mysqli_connect($servername, $username, $password);
if (!$conn) {
    die("Connection failed: " . mysqli_connect_error());
}
echo "Connected successfully";
?>
```

OR

Solution 3:

```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
try {
    $conn = new PDO("mysql:host=$servername;dbname=myDB", $username,
$password);
    // set the PDO error mode to exception
    $conn->setAttribute(PDO::ATTR_ERRMODE,
PDO::ERRMODE_EXCEPTION);
    echo "Connected successfully";
} catch(PDOException $e) {
    echo "Connection failed: " . $e->getMessage();
}
?>
```



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c)	Ans.	<p>Explain the concept of constructor and destructor in detail.</p> <p>Constructor: A constructor is a special built-in method. Constructors allow initializing object properties when an object is created. A constructor method execute automatically when an object is created. The 'construct' method starts with two underscores (__).T</p> <p>Syntax :function __construct([argument1, argument2, ..., argumentN]) { /* Class initialization code */ } The type of argument1, argument2,.....,argumentN are mixed.</p> <p>Example : <?php class student { var \$name; function __construct(\$name) { \$this->name=\$name; } function display() { echo \$this->name; } } \$s1=new student("xyz"); \$s1->display(); ?></p> <p>Destructor: A destructor is the counterpart of constructor. A destructor function is called when the object is destroyed. A destructor function cleans up any resources allocated to an object after the object is destroyed. A destructor function is commonly called in two ways: When a script ends or manually delete an object with the unset() function.The 'destruct' method starts with two underscores (__).</p> <p>Syntax :function __destruct() { /* Class initialization code */ } The type of argument1, argument2,.....,argumentN are mixed.</p>	6M
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*Explanation of
Constructor
3M*

*Explanation of
destructor
3M*



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		<p>Example :</p> <pre><?php class student { var \$name; function __construct(\$name) { \$this->name=\$name; } function __destruct() { echo "Destructor is executing " . \$this->name; } } \$s1=new student("xyz"); ?></pre>	
6.	<p>a)</p> <p>Ans.</p>	<p>Attempt any TWO of the following</p> <p>Describe form controls – text box, text area, radio button, check box, list & buttons</p> <p>Form Controls :</p> <p>1. Textbox : A text box is used to enter data. It is a single line input on a web page.</p> <p>Tag :<input type="text"> : It is used to display a text box on a web page.</p> <p>Attributes of <input> tag used with text box:</p> <p>name=" text" : Specify name of text box for unique identification.</p> <p>maxlength=number : Specify maximum number of characters that can be accepted in a textbox.</p> <p>size=number : Specify the width of text box in number of characters.</p> <p>value="text" : Specify default text value that appears in the text box when loaded on a web page.</p> <p>Example:<input type="text" name="n1" maxlength=20 size=15 value="Enter your name" ></p> <p>2. Textarea : It is used to display a textbox that allow user to enter multiple lines of text. Scrollbar is used to move up and down as well as left and right if the contents are more than size of box.</p> <p>Tag :<textarea> ... </textarea> : It is used to display a multiline text box on a web page.</p>	<p>12M</p> <p>6M</p> <p><i>Description of each control</i></p> <p>1M</p>



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	<p>Attributes: name="text" : Specify name of the element for unique identification. cols=number : Specify width of the text area. rows=number : Specify height of the text area. readonly : Specify a text area as read only element. Example:<textarea name="t1" cols=10 rows=10>Enter your suggestions</textarea></p> <p>3. Radio / option button : Radio buttons are used to display multiple options from which user can select only one option. When a radio button is selected by user, a dot symbol appears inside button. Multiple option buttons are group together to allow user to select only one option from the group. A group can be created by giving same name to all option buttons in that group.</p> <p>Tag :<input type="radio"> : It is used to display a radio button on a web page.</p> <p>Attributes of <input> tag used with radio button: name="text" : Specify name of radio button for unique identification. value="text" : Specify value to be returned to the destination if that radio button is selected. checked: Specify default selection Example:<input type="radio" name="r1" value="male">male <input type="radio" name="r1" value="female" checked>female</p> <p>4. Checkbox : Checkbox elements are used to display multiple options from which user can select one or more options. When a checkbox is selected by user, a tickmark(✓) symbol appears inside box.</p> <p>Tag: <input type="checkbox"> : It is used to display a checkbox on a web page.</p> <p>Attributes of <input> tag used with checkbox: name="text" : Specify name of checkbox for unique identification. value="text" : Specify value to be returned to the destination if that checkbox is checked. Checked: Specify default selection.</p> <p>Example: <input type="checkbox" name="c1" value="pen" checked>pen</p>	
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	<p>5. Select element (list) :<select> ... </select> : This tag is used to create a drop-down list box or scrolling list box from which user can select one or more options.</p> <p>Attributes: name=" text" : Specify name of the element for unique identification. size=number : Specify number of options visible in a list box on a web page. Multiple : Allow user to select multiple option with control key. <option> ... </option> tag is used to insert item in a list.</p> <p>Attributes: value="text" : Specify value to be sent to the server once selected by user. selected: Specify default selection. Example:<select name="s1" size=2> <option value=" Pizza">Pizza1 </option> <option value=" Burger">Burger</option> <option value=" Chocolate">Chocolate</option> </select></p> <p>6. Note: Explanation of button OR submit button OR reset button shall be considered</p> <p>i) Button : Buttons are used to display a command button which user can click on web page to perform some action. Tag :<input type="button"> : It is used to display a button on a web page. Attributes of <input> tag used with button: name=" text" : Specify name of button for unique identification. value="text" : Specify value to be displayed on button. Example:<input type="button" name="b1" value="login"></p> <p>ii) Submit button : Submit button is used to display a command button which user can click on web page to submit information entered in a form. Tag :<input type="submit"> : It is used to display a submit button on a web page. Attributes of <input> tag used with submit button: name=" text" : Specify name of submit button for unique identification. value="text" : Specify value to be displayed on submit button. Example:<input type="submit" name="s1" value="Submit Form"></p> <p>iii) Reset button : Reset button is used to clear all elements with their original state after user clicks on it.</p>	
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		<p>Tag :<input type="reset"> : It is used to display a reset button on a web page.</p> <p>Attributes of <input> tag used with reset button:</p> <p>name=" text" : Specify name of reset button for unique identification</p> <p>value="text" : Specify value to be displayed on reset button.</p> <p>Example: <input type="reset" name="r1" value="Reset Form"></p>	
	<p>b) Ans.</p>	<p>Write a program to create pdf document in PHP</p> <pre><?php require("fpdf/fpdf.php"); // path to fpdf.php \$pdf = new FPDF(); \$pdf->addPage(); \$pdf->setFont("Arial", 'IBU', 16); \$pdf->settextcolor(150,200,225); \$pdf->cell(40, 10, "Hello Out There!"); \$pdf->output(); ?></pre>	<p>6M</p> <p><i>Correct logic 3M</i></p> <p><i>Correct syntax 3M</i></p>
	<p>c) Ans.</p>	<p>Elaborate the following:</p> <p>i) _call()</p> <p>ii) Mysqli_connect()</p> <p>Function overloading :</p> <p>When a class has more than one function with same name but different number of parameters then it is referred as function overloading. A same name function behaves differently depending on arguments / parameters passed to it.</p> <p>__call() :In PHP, for function overloading , __call() method is used. This function is triggered while invoking overloaded methods in the object context.The \$name argument is the name of the method being called. The \$arguments argument is an enumerated array containing the parameters passed to the \$named method.</p> <p>Example :</p> <pre><?php class Shape1 { const PI1 = 3.142 ; function __call(\$name1,\$arg1){ if(\$name1 == 'area1') switch(count(\$arg1)){</pre>	<p>6M</p> <p><i>Relevant explanation of each 3M</i></p>



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	<pre>case 0 : return 0 ; case 1 : return self::PI1 * \$arg1[0] ; case 2 : return \$arg1[0] * \$arg1[1]; } } } \$circle1 = new Shape1(); echo "Area of Circle= ".\$circle1->area1(3); echo "

"; \$rect1 = new Shape1(); echo "Area of Rectangle= ".\$rect1->area1(8,6); ?></pre> <p>ii) Mysql_connect() Mysql_connect() function opens a new connection to the MySQL server.</p> <p>Syntax : mysql_connect(host, username, password, dbname)</p> <p>host: Optional parameter. It specifies a host name . username: It specify MySQL username. Password: It specify MySQL password. Dbname: It specify the database name to be used to connect php code.</p> <p>Example : <?php \$servername = "localhost"; \$username = "username"; \$password = "password"; \$conn = mysql_connect(\$servername, \$username, \$password); if (!\$conn) { die("Connection failed: " . mysql_connect_error()); } echo "Connected successfully"; ?></p>	
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