Short Answer Questions (5 Marks Each)

2080 Q.No. 11: Write a JavaScript code to calculate the factorial of a given number.
javascript

```
function factorial(n) {
    if (n === 0 || n === 1) {
        return 1;
    }
    let result = 1;
    for (let i = 2; i <= n; i++) {
        result *= i;
    }
    return result;
}
console.log(factorial(5)); // Example: calculates factorial of 5
```

1.

2079 GIE Set A Q.No. 11: Write a function to enter two numbers and find the sum of two numbers in JavaScript.
javascript
Copy code

```
function addTwoNumbers(a, b) {
    return a + b;
}

let num1 = parseFloat(prompt("Enter the first number: "));
let num2 = parseFloat(prompt("Enter the second number: "));

let sum = addTwoNumbers(num1, num2);
console.log("The sum of two numbers is: " + sum);
```

2.

Long Answer Questions (8 Marks Each)

1. **2079 GIE Set B Q.No. 15**: What are the uses of JavaScript in web page development? How do you connect the PHP MySQL database? Explain with connection class.
   Answer:

- **Uses of JavaScript in Web Page Development**:
  - Adds interactivity to web pages, making them more dynamic.
  - Validates user inputs before sending data to the server.
  - Manipulates HTML and CSS to update content and style without reloading the page.
  - Fetches data asynchronously from a server using AJAX.
  - Implements animations and user interface enhancements.

Connecting PHP with MySQL Database: To connect PHP with MySQL, use the `mysqli` or `PDO` class. Here is an example using `mysqli`:

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "database_name";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);

// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";
?>
```

-

2079 GIE Set B Q.No. 16: Write down the server-side script to create a database, connect with it, create a table, and insert data in it.
Answer:

```
<?php
$servername = "localhost";
$username = "root";
$password = "";

// Create connection
$conn = new mysqli($servername, $username, $password);
```

```
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

// Create database
$sql = "CREATE DATABASE myDatabase";
if ($conn->query($sql) === TRUE) {
    echo "Database created successfully";
} else {
    echo "Error creating database: " . $conn->error;
}

// Select database
$conn->select_db("myDatabase");

// Create table
$sql = "CREATE TABLE Users (
    id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
    firstname VARCHAR(30) NOT NULL,
    lastname VARCHAR(30) NOT NULL,
    email VARCHAR(50),
    reg_date TIMESTAMP
)";

if ($conn->query($sql) === TRUE) {
    echo "Table Users created successfully";
} else {
    echo "Error creating table: " . $conn->error;
}

// Insert data
$sql = "INSERT INTO Users (firstname, lastname, email)
        VALUES ('John', 'Doe', 'john@example.com')";

if ($conn->query($sql) === TRUE) {
    echo "New record created successfully";
} else {
```

```
    echo "Error: " . $sql . "<br>" . $conn->error;
}

$conn->close();
?>
```

Advance php:

1. WAP to find sum of two numbers. Here, numbers are entered via html form.

```
<h1> PHP program to find sum of two numbers</h1>
<form method="post">
First Number :
<input type="text" name="firstnum"><br><br>
Second Number :
<input type="text" name="secondnum"><br><br>
<input type="submit" name="submit" value="sum">
</form>

<?php
if(isset($_POST['submit']))
{
$n1=$_POST['firstnum'];
$n2=$_POST['secondnum'];
$s=$n1+$n2;
echo "Sum of two numbers is ".$s;
}

  ?>
```

2. Write a PHP program to swap two numbers.

```
<h2>PHP program to swap two numbers</h2>
<form method="post">
        First Number :
        <input type="text" name="num1"><br><br>
        Second Number :
        <input type="text" name="num2"><br><br>
        <input type="submit" name="submit" value="submit">
</form>
```

```
<?php
if(isset($_POST['submit'])) {
$a=$_POST['num1'];
$b=$_POST['num2'];
echo " Before swapping ";
echo " <br>First Number ".$a;
echo " <br> Second Number ".$b;
$temp=$a;
$a=$b;
$b=$temp;
echo " <br>After swapping ";
echo "<br>First Number ".$a;
echo "<br> Second Number ".$b;
}
?>
```

3. Write a PHP program to input name and address using form and display them.

```
<h2> PHP program to enter name and address </h2>
<form method="post">
Enter Name: <input type="text" name="name"><br><br>
Enter Address : <input type="text" name="address"><br><br>
<input type="submit" name="submit" value="Submit">
</form>

<?php
if(isset($_POST['submit'])){
$n=$_POST['name'];
$a=$_POST['address'];
echo "<br> Name = ".$n;
echo "<br> Address = " .$a;
}
?>
```

4. Write a PHP program to find the greatest number among three numbers. Here, numbers are entered via html form.

```
<h2> PHP program to find greatest number among three numbers</h2>
<form method="post">
	First Number :
	<input type="text" name="num1">
	<br><br>
	Second Number:
	<input type="text" name="num2">
	<br><br>
	Third Number:
	<input type="text" name="num3">
	<br><br>
	<input type="submit" name="submit">
</form>
<?php
if(isset($_POST['submit']))
{
	$n1=$_POST['num1'];
	$n2=$_POST['num2'];
	$n3=$_POST['num3'];
if($n1>$n2&&$n1>$n3)
	echo $n1;
else if($n2>$n1&&$n2>$n3)
	echo $n2;
else
	echo $n3;
}
?>
```

5. Write a PHP program to input any number via form and check whether the number is positive or negative and be sure number should not be zero.

```
<h2> PHP program to input any number via form and check whether the number is positive or negative and be sure number should not be zero</h2>
<form method="post">
Enter number:
<input type="text" name="num"><br><br>
<input type="submit" name="submit" value="Submit">
```

```
</form>

<?php
if(isset($_POST['submit'])){
$n=$_POST['num'];
if($n==0)
echo '<script>alert("Enter non zero number")</script>';
else if($n>0)
        echo "Positive number";
else
        echo "Negative number";
}
?>
```

6. Write a PHP program to display your name 100 times.

```
<?php
        $name = "Alex Lal Karn";
        for($i=0;$i<100;$i++)
        {
                echo $name;
                echo "<br>";
        }

   ?>
```

7. Write a PHP program to print a multiplication table of a number. Input the number via form.

```
<form method="post">
        Enter Number:
        <input type="text" name="num">
        <br><br>
        <input type="submit" name="submit">
        </form>

        <?php
        if(isset($_POST['submit']))
        {
        $n=$_POST['num'];
```

```
for($i=1;$i<=10;$i++)
{
        echo $n*$i;
        echo '<br>';
}
}

?>
```

8. Write a PHP program to display the factorial value of a number.

```
<form method="post">
    Enter number :
    <input type="text" name="num"><br><br>
    <input type="submit" name="submit">
</form>

    <?php
    if(isset($_POST['num']))
    {
    $n=$_POST['num'];
    $f=1;
    for($i=1;$i<=$n;$i++){
        $f=$f*$i;
    }
    echo "Factorial = ".$f;
    }
    ?>
```

9. Write a PHP to print factors of a number.

```
<form method="post">
    Enter number :
    <input type="text" name="num"><br><br>
    <input type="submit" name="submit">
</form>

    <?php
    if(isset($_POST['num']))
    {
```

```
$n=$_POST['num'];
$f=1;
for($i=1;$i<=$n;$i++)
{
        if($n%$i==0)
        {
                echo $i;
                echo "<br>";
        }
}
}
?>
```

10. Write a PHP program to store some strings in an array and print them.

```
<?php
$subjects = array("Compulsory English", "Compulsory Nepali",
"Social","Accounts","Economics","Computer");
for ($i=0;$i<count($subjects);$i++)
{
        echo $subjects[$i];
        echo "<br>";
}

   ?>
```

11. Write a PHP program to sort data stored in an array. [Use sort() function and print_r() to print.]

```
<?php
$numbers = array(2,0,4,5);
sort($numbers);
print_r($numbers);

   ?>
```

12. Write a PHP program to know whether two strings are the same or not.

```
<?php
                $str1 = "Alex Lal Karn";
                $str2 = "Computer Science";
```

```
        if(strcmp($str1, $str2) == 0){
                echo "Strings are same";
        }else{
                echo "Strings are not same";
        }
    ?>
```

13. Write a PHP program to input a string through a text box and find its length.[use strlen()]

```
<form method="post">
        <input type="text" name="userText" placeholder="Enter text">
        <input type="submit" value="Find Length">
</form>

    <?php
  if(isset($_POST['userText']))
    {
    $str=$_POST["userText"];
    echo "Length=".strlen($str);
  }
    ?>
```

14. Write a PHP program to connect a database named ‘student’.

```
<?php
    $servername="localhost";
    $username="root";
    $password="";
    $dbname="student";
    $conn=new mysqli($servername,$username,$password,$dbname);
    if($conn->connect_error)
    die("Connection failed:".mysqli_connect_error());
    else
    echo "Database connected successfully";
?>
```

15. Write a PHP program to insert records in a database named student with fields id, name and grade.

```
<?php
        $servername="localhost";
        $username="root";
        $password="";
        $dbname="student";
        $conn=new mysqli($servername,$username,$password,$dbname);
        if($conn->connect_error)
        die("Connection failed:".mysqli_connect_error());
        else
        echo "Database connected successfully";
        $sql="insert into studentrec (id,name,grade)values (101,'Tsering Sherpa',12)";
if($conn->query($sql)===true)
{
        echo "Inserted data successfully";
}
else{
        echo "Error in inserting data:".$conn->error;
}
$conn->close();
?>
```

16. Write a PHP program to display all records (previous question) of students who are in grade 11.

```
<?php
        $servername="localhost";
        $username="root";
        $password="";
        $dbname="student";
        $conn=new mysqli($servername,$username,$password,$dbname);
        if($conn->connect_error){
        die("Connection failed:".mysqli_connect_error());
 }
        $sql="SELECT *FROM studentrec WHERE grade='11'";
$result=$conn->query($sql);
if($result->num_rows>0)
{
```

```
        while($row=$result->fetch_assoc())
        {
                echo "<br> id:".$row["id"]." - Name: ".$row["name"]." - Grade :
".$row["grade"];
        }
}
else {
        echo "0 results";
}
$conn->close();
?>
```

17. Write a PHP program to delete records of a student whose id is 3.[previous question]

```
<?php
        $servername="localhost";
        $username="root";
        $password="";
        $dbname="student";
        $conn=new mysqli($servername,$username,$password,$dbname);
        if($conn->connect_error)
        die("Connection failed:".mysqli_connect_error());

        $sql="DELETE FROM studentrec WHERE id=3";
if($conn->query($sql)===true)
{
        echo "Data deleted ";
}
else{
        echo "Error in deleting data:".$conn->error;
}
$conn->close();
?>
```

18. Write a PHP program to update a record of student whose id is 2.[Try same program with name/grade.]

```php
<?php
	$servername="localhost";
	$username="root";
	$password="";
	$dbname="student";
	$conn=new mysqli($servername,$username,$password,$dbname);
	if($conn->connect_error)
	die("Connection failed:".mysqli_connect_error());
	else
	echo "Database connected successfully";
	$sql="UPDATE studentrec SET name='ABC' WHERE id=2;";
if($conn->query($sql)===true)
{
	echo "Data updated successfully";
}
else{
	echo "Error in data update :".$conn->error;
}
$conn->close();

   ?>
```