

J. BASKARAN M.Sc., B.Ed. (C.S)
jbaskaran89@gmail.com
Puducherry.

J. ILAKKIA M.Sc., M.Phil., B.Ed. (C.S)
jilakkia@gmail.com
Puducherry.

COMPUTER APPLICATION

5. PHP Function and Array

Section – A

Choose the best answer

(1 Mark)

1. Which one of the following is the right way of defining a function in PHP?
 - a) function { function body }
 - b) data type functionName(parameters) { function body }
 - c) functionName(parameters) { function body }
 - d) function functionName(parameters) { function body }**
2. 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
3. PHP's numerically indexed array begins with position _____.
 - a) 1
 - b) 2
 - c) 0**
 - d) -1
4. Which of the following are correct ways of creating an array?
 - i) state[0] = "Tamilnadu";
 - ii) \$state[] = array("Tamilnadu");
 - iii) \$state[0] = "Tamilnadu";
 - iv) \$state = array("Tamilnadu");
 - a) iii) and iv)
 - b) ii) and iii)
 - c) Only iv)**
 - d) ii), iii) and iv)
5. What will be the output of the following PHP code?

```
<?php
$a=array("A","Cat","Dog","A","Dog");
$b=array("A","A","Cat","A","Tiger");
$c=array_combine($a,$b);
print_r(array_count_values($c));
?>
```

 - a) Array ([A] => 5 [Cat] => 2 [Dog] => 2 [Tiger] => 1)**
 - b) Array ([A] => 2 [Cat] => 2 [Dog] => 1 [Tiger] => 1)
 - c) Array ([A] => 6 [Cat] => 1 [Dog] => 2 [Tiger] => 1)
 - d) Array ([A] => 2 [Cat] => 1 [Dog] => 4 [Tiger] => 1)

6. For finding nonempty elements in array we use

- a) is_array () function b) **sizeof () function** c) array_count () function d) **count () function**

7. Indices of arrays can be either strings or numbers and they are denoted as

- a) \$my_array {4} b) **\$my_array [4]** c) \$my_array| 4 | d) None of them

8. PHP arrays are also called as

- a) **Vector arrays** b) Perl arrays c) **Hashes** d) All of them

9. As compared to associative arrays vector arrays are much

- a) Faster b) **Slower** c) Stable d) None of them

10. What functions count elements in an array?

- a) **count** b) **Sizeof** c) Array_Count d) Count_array

Section-B

Answer the following questions

(2 Marks)

1. Define Function in PHP.

- A function is a block of segment in a program that performs a specific operation or tasks.
- It is a type of sub routine or procedure in a program.
- Functions are reusable; i.e a task can be executed any number of times.

2. Define User define Function.

- **User Defined Function (UDF)** in PHP allows user to write own specific operation inside of existing program module.
- A user-defined Function declaration begins with the keyword “function” followed by a user defined function name and any custom logic inside the function block.

• **SYNTAX:**

```
function functionName()
{
    Custom Logic code to be executed;
}
```

3. What is parameterized Function.

- PHP Parameterized functions are the functions with parameters or arguments.
- Required information can be shared between function declaration and function calling part inside the program.
- The arguments are mentioned after the function name and inside of the parenthesis.
- There is no limit for sending arguments, just separate them with a comma notation.

4. List out System defined Functions.

- A function is already created by system are called system defined functions.

- **Example:**

- round()
- sqrt()
- date()
- sin()
- cos()

5. Write Syntax of the Function in PHP.

- **SYNTAX:**

```
function functionName()  
{  
    Custom Logic code to be executed;  
}
```

6. Define Array in PHP.

- An array is a special variable, which can hold more than one value of same data type (homogeneous) in single array variable.
- It's a collection of heterogeneous data.
- There are 3 types of array concepts in PHP.
 - Indexed Arrays,
 - Associative Array and
 - Multi-Dimensional Array.

7. Write the Usage of Array in PHP.

- A useful aspect of using arrays in PHP is when combined with the foreach statement.
- This allows you to quickly loop through an array with very little code.

8. List out the types of array in PHP.

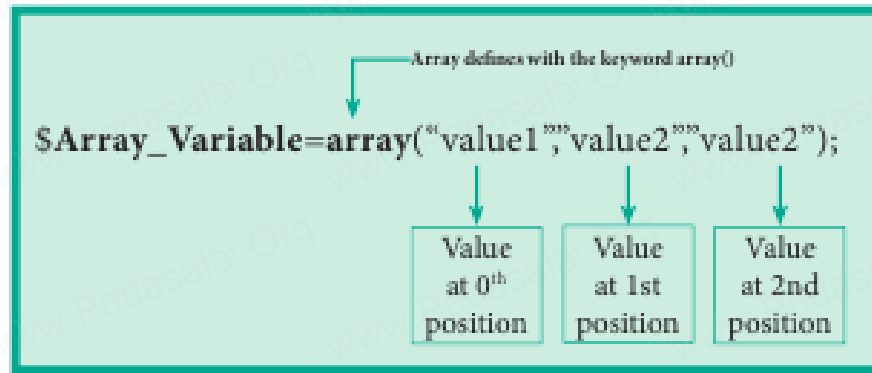
Associative Array \implies Associative arrays are arrays that use named keys that you assign to them.

Indexed Arrays \implies The index can be assigned automatically in a collection of data set

Multi-Dimensional Array \implies A multidimensional array is an array containing one or more arrays.

9. Define associative array.

- Associative arrays are arrays that use named keys that you assign to them.
- Associative arrays help you to store your data in a collection and assign it a unique key which you may use for referencing your data.

10. Write array Syntax in PHP.**Section-C****Answer the following questions****(3 Marks)****1. Write the features System define Functions.**

Features of built-in functions are as mentioned below:

- Converting a string of letters to uppercase and lowercase
- Displaying and using the date and time
- Initializing and closing a database connection
- Declaring and using an array
- Handling files
- Accessing data in forms
- File system Functions
- Function to open FTP connections
- Email related functions
- Mathematical Functions
- MySQL specific functions
- URL Functions
- Image functions

2. Write the purpose of parameterized Function.

- Required information can be shared between function declaration and function calling part inside the program.
- The parameter is also called as arguments, it is like variables.
- The arguments are mentioned after the function name and inside of the parenthesis.
- There is no limit for sending arguments, just separate them with a comma notation.

3. Differentiate user define and system define Functions.

System Define Functions	User Define Function
A function is already created by system to perform specific task.	User create their own functions based on their needs.
They are embedded in language and are provided by compiler	They are provided by user from an external library.
Example: round(), sin(), date()	Example: area(), display()

4. Write Short notes on Array.

- An array is a special variable, which can hold more than one value of same data type (homogeneous) in single array variable.
- It's a collection of heterogeneous data.
- There are 3 types of array concepts in PHP.
- **Associative Array** \implies Associative arrays are arrays that use named keys that you assign to them.
- **Indexed Arrays** \implies The index can be assigned automatically in a collection of data set
- **Multi-Dimensional Array** \implies A multidimensional array is an array containing one or more arrays.

5. Differentiate Associate array and Multidimensional array.

Associative array	Multidimensional array
Associative arrays are arrays that use named keys that you assign to them.	A multidimensional array is an array containing one or more arrays.
Associative arrays can create values in similar way like indexed arrays.	Each array within the multidimensional array can be either indexed array or associative array.

Section - D**Answer the following questions:****(5 Marks)****1. Explain Function concepts in PHP.**

- A function is a block of segment in a program that performs a specific operation or tasks.
- It is a type of sub routine or procedure in a program.
- Functions are reusable; i.e a task can be executed any number of times.
- A Function will be executed by a call to the Function and the Function returns any data type values or NULL value to called Function in the part of respective program.
- The Function can be divided in to three types as follows
 - User defined Function,
 - Pre-defined or System or built-in Function, and
 - Parameterized Function

a) User Defined Function:

- **User Defined Function (UDF)** in PHP allows user to write own specific operation inside of existing program module.
- A user-defined Function declaration begins with the keyword “function” followed by a user defined function name and any custom logic inside the function block.

SYNTAX:**function** *functionName()*

{

Custom Logic code to be executed;

}

➤ Function Calling:

- A function declaration part will be executed by a call to the function.
- Programmer has to create Function Calling part inside the respective program.

SYNTAX:*functionName();*

- **Example:**

```
<?php
function insertMsg()
{
echo "Student Details Inserted Successfully!";
}
insertMsg();
?>
```

b) System Defined Function:

- A function is already created by system it is a reusable piece or block of code that performs a specific action.
- Functions can either return values when called or can simply perform an operation without returning any value.
- They are embedded in language and are provided by compiler.

- **Example:**

- round()
- sqrt()
- date()
- sin()
- cos()

c) Parameterized Defined Function:

- PHP Parameterized functions are the functions with parameters or arguments.
- Required information can be shared between function declaration and function calling part inside the program.
- The arguments are mentioned after the function name and inside of the parenthesis.
- There is no limit for sending arguments, just separate them with a comma notation.

- **Example:**

```
<?php
function sum($x, $y) {
$z = $x + $y;
return $z;
```



```

}

echo "5 + 10 =" . sum(5, 10) . "<br>";
echo "7 + 13 =" . sum(7, 13) . "<br>";
echo "2 + 4 =" . sum(2, 4);
?>

```

2. Discuss in detail about User define Functions.

Function:

- A function is a block of segment in a program that performs a specific operation or tasks.
- It is a type of sub routine or procedure in a program.
- Functions are reusable; i.e a task can be executed any number of times.

User Defined Function:

- **User Defined Function (UDF)** in PHP allows user to write own specific operation inside of existing program module.
- A user-defined Function declaration begins with the keyword "function" followed by a user defined function name and any custom logic inside the function block.

- **SYNTAX:**

```

function functionName()
{
    Custom Logic code to be executed;
}

```

- **Function Calling:**

- A function declaration part will be executed by a call to the function.
- Programmer has to create Function Calling part inside the respective program.

- **SYNTAX:**

```
functionName();
```

- **Example:**

```

<?php
function insertMsg()
{
    echo "Student Details Inserted Successfully!";
}
insertMsg();
?>

```


3. Explain the Multidimensional Array.

- A multidimensional array is an array containing one or more arrays.
- PHP understands multidimensional arrays that are two, three, four, five, or more levels deep.
- However, arrays more than three levels deep are hard to manage for most people.
- Each array within the multidimensional array can be either indexed array or associative array.
- We can use for looping through indexed array and foreach for looping through associative array.

Example:

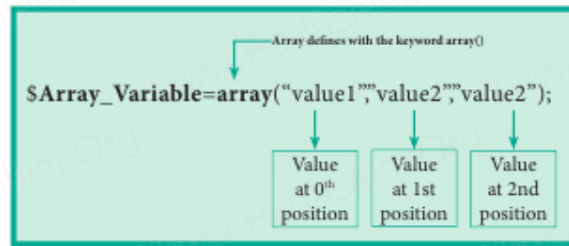
```
<?php
// A two-dimensional array
$student=array
(
array("Iniyan",100,96),
array("Kavin",60,59),
array("Nilani",1313,139)
);
echo $$student[0][0].": Tamil Mark: ".$student [0][1].". English mark: ".$student [0][2]."<br>";
echo $$student[1][0].": Tamil Mark: ".$student [1][1].". English mark: ".$student [1][2]."<br>";
echo $$student[2][0].": Tamil Mark: ".$student [2][1].". English mark: ".$student [2][2]."<br>";
?>
```

4. Explain Array concepts and their types.

- An array is a special variable, which can hold more than one value of same data type (homogeneous) in single array variable.
- It's a collection of heterogeneous data.
- There are 3 types of array concepts in PHP.
- A useful aspect of using arrays in PHP is when combined with the foreach statement.
- This allows you to quickly loop through an array with very little code.

Array Syntax:

- Array defines with the keyword array()



a) Indexed Arrays

- Arrays with numeric index for the available values in array variable which contains key value pair as user / developer can take the values using keys.

Example:

```
<?php
$teacher_name=array("Iniyan", "Kavin", "Nilani");
echo "The students name are " . $teacher_name[0] . ", " . $teacher_name[1] . " and " .
$teacher_name[2] . ".";
?>
```

b) Associative Arrays

- Associative arrays are a key-value pair data structure.
- Instead of having storing data in a linear array, with associative arrays you can store your data in a collection and assign it a unique key which you may use for referencing your data.

Associative Arrays Syntax

array(key=>value,key=>value,key=>value,etc.);

key = Specifies the key (numeric or string)

value = Specifies the value

Example:

```
<?php
$teacher_name=array("Iniyan", "Kavin", "Nilani");
echo "The students name are " . $teacher_name[0] . ", " . $teacher_name[1] . " and " .
$teacher_name[2] . ".";
?>
```

c)Multidimensional Arrays

- A multidimensional array is an array containing one or more arrays.
- PHP understands multidimensional arrays that are two, three, four, five, or more levels deep.
- However, arrays more than three levels deep are hard to manage for most people.

Example:

```
<?php
// A two-dimensional array
$student=array
(
array("Iniyan",100,96),
array("Kavin",60,59),
array("Nilani",1313,139)
);
echo $$student[0][0].": Tamil Mark: ".$student [0][1].". English mark: ".$student [0][2]."<br>";
echo $$student[1][0].": Tamil Mark: ".$student [1][1].". English mark: ".$student [1][2]."<br>";
echo $$student[2][0].": Tamil Mark: ".$student [2][1].". English mark: ".$student [2][2]."<br>";
?>
```

5. Explain Indexed array and Associate array in PHP.

a) Indexed Arrays

- Arrays with numeric index for the available values in array variable which contains key value pair as user / developer can take the values using keys.

Example:

```
<?php
$teacher_name=array("Iniyan", "Kavin", "Nilani");
echo "The students name are " . $teacher_name[0] . " , " . $teacher_name[1] . " and " .
$teacher_name[2] . " .";
?>
```

b) Associative Arrays

- Associative arrays are a key-value pair data structure.
- Instead of having storing data in a linear array, with associative arrays you can store your data in a collection and assign it a unique key which you may use for referencing your data.

Associative Arrays Syntax

array(*key=>value,key=>value,key=>value,etc.*);

key = Specifies the key (numeric or string)

value = Specifies the value

Example:

```
<?php
```

```
$teacher_name=array("Iniyan", "Kavin", "Nilani");
```

```
echo "The students name are " . $teacher_name[0] . ", " . $teacher_name[1] . " and " .
```

```
$teacher_name[2] . ".";
```

```
?>
```

PREPARED BY

J. BASKARAN M.Sc., B.Ed. (C.S)
jaskaran89@gmail.com

J. ILAKKIA M.Sc., M.Phil., B.Ed. (C.S)
jilakkia@gmail.com

J. BASKARAN M.Sc., B.Ed. (C.S)

jbaskaran89@gmail.com

Puducherry.

J. ILAKKIA M.Sc., M.Phil., B.Ed. (C.S)

jilakkia@gmail.com

Puducherry.

COMPUTER APPLICATION**9. CONNECTING PHP AND MYSQL****Section – A****Choose the best answer****(1 Mark)**

- Which one of the following statements instantiates the mysqli class?
 - mysqli = new mysqli()
 - \$mysqli = new mysqli()**
 - \$mysqli->new(mysqli)
 - mysqli->new(mysqli)
- which one is correct way, we can retrieve the data in the result set of MySQL using PHP?
 - mysql_fetch_row
 - mysql_fetch_array
 - mysql_fetch_object
 - All the above**
- How Can we Create a Database Using PHP and MySQL?
 - mysqli_create_db("Database Name")**
 - mysqli_create_db("Data")
 - create_db("Database Name")
 - create_db("Data")
- Which is the correct function to execute the SQL queries in PHP ?
 - mysqli_query("Connection Object","SQL Query")**
 - query("Connection Object","SQL Query")
 - mysql_query("Connection Object","SQL Query")
 - mysql_query("SQL Query")
- Which is the correct function Closing Connection in PHP ?
 - mysqli_close("Connection Object");**
 - close("Connection Object");
 - mysql_close("Connection Object");
 - mysqli_close("Database Object");
- Which is the correct function to establish Connection in PHP ?
 - mysqli_connect("Server Name ","User Name","Password","DB Name");**
 - connect("Server Name ","User Name","Password","DB Name");
 - mysql_connect("Server Name ","User Name","Password","DB Name");
 - mysqli_connect ("Database Object");
- Which is the not a correct MySQL Function in PHP ?
 - Mysqli_connect() Function
 - Mysqli_close() Function
 - mysqli_select_data() Function**
 - mysqli_affected_rows() Function
- How many parameter are required for MySQLi connect function in PHP ?
 - 2
 - 3
 - 4**
 - 5
- How many parameter are required for MySQLi query function in PHP ?
 - 2**
 - 3
 - 4
 - 5
- How many parameter are required for MySQLi Close function in PHP ?
 - 1**
 - 2
 - 3
 - 5
- Which version of PHP supports MySQLi fuctions ?
 - Version 2.0
 - Version 3.0
 - Version 4.0
 - Version 5.0**

Section-B**Answer the following questions****(2 Marks)****1. What are the MySQLi function available PHP?**

- Mysqli_connect() Function
- Mysqli_close() Function
- mysqli_select_db() Function
- mysqli_affected_rows() Function
- mysqli_connect_error() Function
- mysqli_fetch_assoc() Function

2. What is MySQLi function?

- MySQLi is extension in PHP scripting language which gives access to the MYSQL database.
- Functions are available for MySQL Database connectivity and executing SQL queries.

3. What are the types MySQLi function available PHP?

- Database Connections
- Managing Database Connections
- Performing Queries
- Closing Connection

4. Difference between Connection and Close function?

Connection	Close function
Connect to Database Server machine via PHP scripting language using Mysqli_connect() Function.	mysqli_close() Function is used to close an existing opened database connection between PHP scripting and MySQL Database Server.
<u>Syntax:</u> mysqli_connect(“Server Name “,”User Name”,”Password”,”DB Name”);	<u>Syntax:</u> mysqli_close(“Connection Object”);

5. Give few examples of MySQLi Queries.**EXAMPLES:**

- 1) SELECT * FROM Customers;
- 2) SELECT CustomerName, City FROM Customers;
- 3) SELECT * FROM Customers WHERE Country='Mexico';
- 4) SELECT * FROM Customers WHERE Country='Germany' AND City='Berlin';
- 5) DELETE FROM Customers WHERE CustomerName='Alfreds Futterkiste';

6. What is Connection string?

- The variables used to connect to the Database server are
 - \$servername -> Database Server IP address
 - \$username -> Database Server User Name
 - \$password -> Database Server Password
 - \$DB_Name -> Database Name
- The mysqli_connect function uses these variables and connect Database server from PHP scripting.
- If connection gets fail, output will be printed with MySQL error code.
- Otherwise connection is success.

7. What is web Database?

- A **Web database** is a **database** application designed to be managed and accessed through the Internet.
- Website operators can manage this collection of data and present analytical results **based** on the data in the **Web database** application.

8. What is mysqli_fetch_assoc() Function?

- The mysqli_fetch_assoc() function returns a row from a recordset as an associative array.
- This function gets a row from the mysqli_query() function and returns an array on success, or FALSE on failure or when there are no more rows.
- **Syntax:**

mysqli_fetch_assoc(data)

9. Define mysqli_connect_error() Function.

- The mysqli_connect_error() function returns the error description from the last connection error, if any.

Syntax:

mysqli_connect_error();

10. Define mysqli_affected_rows() Function.

- The mysqli_affected_rows() function returns the number of affected rows in the previous SELECT, INSERT, UPDATE, REPLACE, or DELETE query.

Syntax:

mysqli_affected_rows(connection);

Section-C**Answer the following questions****(3 Marks)****1. Write the Syntax for MySQLi Queries.**

- “mysqli_query” is a function, helps to execute the SQL query statements in PHP scripting language.

Syntax:

mysqli_query(“Connection Object”, “SQL Query”)

2. Write the purpose of MySQLi function available.

- In PHP Scripting language many functions are available for MySQL Database connectivity ,executing SQL queries, and management.
 - Mysqli_connect() Function
 - Mysqli_close() Function
 - mysqli_select_db() Function
 - mysqli_affected_rows() Function
 - mysqli_connect_error() Function
 - mysqli_fetch_assoc() Function

3. Differentiate mysqli_affected_rows() Function and mysqli_fetch_assoc() Function.

mysqli_affected_rows() Function	mysqli_fetch_assoc() Function
<ul style="list-style-type: none"> • The mysqli_affected_rows() function returns the number of affected rows in the previous SELECT, INSERT, UPDATE, REPLACE, or DELETE query. 	<ul style="list-style-type: none"> • The mysqli_fetch_assoc() function returns a row from a recordset as an associative array.
<ul style="list-style-type: none"> • <u>Syntax:</u> mysqli_affected_rows(connection); 	<ul style="list-style-type: none"> • <u>Syntax:</u> mysqli_fetch_assoc(data);

4. Write MySQL Connection Syntax with example.**Syntax:**

mysqli_connect(“Server Name “,”User Name”, “Password”, “DB Name”);

Example:

\$conn = mysqli_connect(\$servername, \$username, \$password,\$DB_name);

5. Write a note on PHP MySQL database connection.

- Before accessing MySQL Database, connect to Database Server machine via PHP scripting language using `Mysqli_connect()` Function.
- This function requires four parameters to connect to database server.
- Database Server name, Database username, password and Database Name.

• **Syntax:**

`mysqli_connect("Server Name ","User Name","Password","DB Name");`

• **Example:**

`$conn = mysqli_connect($servername, $username, $password,$DB_name);`

Section - D

Answer the following questions:

(5 Marks)

1. Discuss in detail about MySQL functions with example .

- In PHP Scripting language many functions are available for MySQL Database connectivity and executing SQL queries.
 - `Mysqli_connect()` Function
 - `Mysqli_close()` Function
 - `mysqli_select_db()` Function
 - `mysqli_affected_rows()` Function
 - `mysqli_connect_error()` Function
 - `mysqli_fetch_assoc()` Function

i) Mysqli connect() Function:

- Before accessing MySQL Database, connect to Database Server machine via PHP scripting language using **Mysqli connect() Function.**

Syntax:

`mysqli_connect("Server Name ","User Name","Password","DB Name");`

- This function requires four parameters to connect to database server.
- Database Server name, Database username, password and Database Name.

ii) Mysqli_close() Function:

- **mysqli_close()** Function is used to close an existing opened database connection between PHP scripting and MySQL Database Server.

Syntax:

```
mysqli_close("Connection Object");
```

iii) Mysqli_select_db() function:

The **mysqli_select_db()** function is used to change the default database for the connection.

Syntax:

```
mysqli_select_db(connection,dbname);
```

iv) Mysqli_fetch_assoc() Function:

- The **mysqli_fetch_assoc()** function returns a row from a recordset as an associative array.
- This function gets a row from the **mysqli_query()** function and returns an array on success, or FALSE on failure or when there are no more rows.

Syntax:

```
mysqli_fetch_assoc(data)
```

v) Mysqli_connect_error() Function:

- The **mysqli_connect_error()** function returns the error description from the last connection error, if any.

Syntax:

```
mysqli_connect_error();
```

vi) Mysqli_affected_rows() Function:

- The **mysqli_affected_rows()** function returns the number of affected rows in the previous SELECT, INSERT, UPDATE, REPLACE, or DELETE query.

Syntax: **mysqli_affected_rows(connection);**

2. Explain the Database error handling and management process in PHP?

Managing Database Connections

The below code snippet describes managing database connection methods and features.

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

- In the above code snippet, three variables are used to connect to the Database server. They are,
 - \$servername -> Database Server IP address
 - \$username -> Database Server User Name
 - \$password -> Database Server Password
 - \$DB_Name -> Database Name
- The mysqli_connect function uses these variables and connect Database server from PHP scripting.
- If connection gets fail, output will be printed with MySQL error code.
- Otherwise connection is success.

3. Explain in details types of MySQL connection method in PHP.

Database Connections:

- Before accessing MySQL Database, connect to Database Server machine via PHP scripting language using Mysqli_connect() Function.

Syntax:

```
mysqli_connect("Server Name ","User Name","Password","DB Name");
```

- This function requires four parameters to connect to database server.
- Database Server name, Database username, password and Database Name.

Managing Database Connections

The below code snippet describes managing database connection methods and features.

```
<?php
$servername = "localhost";
```

```

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

```

- In the above code snippet, three variables are used to connect to the Database server. They are,
 - \$servername -> Database Server IP address
 - \$username -> Database Server User Name
 - \$password -> Database Server Password
 - \$DB_Name -> Database Name
- The mysqli_connect function uses these variables and connect Database server from PHP scripting.
- If connection gets fail, output will be printed with MySQL error code.
- Otherwise connection is success.

4. Explain MySQLi Queries with examples.

- The main goal of MySQL and PHP connectivity is to retrieve and manipulate the data from MySQL database server.
- The SQL query statements are helping with PHP MySQL extension to achieve the objective of MySQL and PHP connection.
- "mysqli_query" is a function, helps to execute the SQL query statements in PHP scripting language.

Syntax:

```
mysqli_query("Connection Object","SQL Query")
```

Example:

```

$con=mysqli_connect("localhost","my_user","my_password","Student_DB ");
$sql="SELECT student_name,student_age FROM student";
mysqli_query($con,$sql);

```

PREPARED BY

J. BASKARAN M.Sc., B.Ed. (C.S)

jbaskaran89@gmail.com

Puducherry.

J. ILAKKIA M.Sc., M.Phil., B.Ed. (C.S)

jilakkia@gmail.com

Puducherry.

COMPUTER APPLICATION**Introduction to Computer Networks****Section – A****Choose the best answer****(1 Mark)**

- A set of computers connecting together is called as -----
 a) **Network** b) Server c) Hub d) Node
- Computer network devices that originates route and terminate the data were called as
 a) Hub b) Resource c) **Node** d) Cable
- Match the period and methods available on history of computer networking in the Internet
 a) 1950 - X.25 TCP/IP
 b) 1966 - SAGE
 c) 1976 - WAN
 d) 1972 - ARCNET
 a 4321 b 3421 c 1234 **d 2341**
- Western Electric introduced the first widely used ----- that implemented true computer control.
 a) Packet switch b) Arpanet c) Host **d) Telephone switch**
- Wi-Fi is short name for
 a) **Wireless Fidelity** b) Wired fidelity c) Wired fiber optic d) Wireless fiber optic
- People everywhere can express and publish their ideas and opinions via
 a) Tele-medicine **b) blogging** c) Server d) Node
- Which one of the following periods, the speed capacity supported towards gigabit on computer network?
 a) SABRE b) SAGE **c) NEW FIBRE OPTICS** d) ARCNET
- One among them was challenging to the business people on computer networking
 a) Hacking b) Viruses **c) Both a & b** d) none of this above
- able to predict, manage, and protect the computer network at Internet
 a) **Artificial intelligence** b) Broadband provider c) Cloud computing d) Transceivers
- use less power comparing with single transmitter or satellite often cell towers nearer
 a) **Mobile devices** b) Transistors c) WIFI d) Communication

11. People now a days getting relaxed via
 a) Business b) Corporate company c) News papers **d) Social media**
12. Which one of the following is not the social media
 a) **Gmail** b) Facebook c) twitter d) Linkedin
13. Facebook was created at -----year
 a) 2002 **b) 2004** c) 2013 d) 2010
14. In mobile network, land areas for network coverage was distributed as
 a) Firmware **b) cells** c) Range d) Service
15. Which one were harmful to computer
 a) Bloggers b) Browser **c) Hackers** d) twitter
16. Which innovation made the people to use Internet?
 a) Social web b) Mobile technology c) Mobile App **d) Both a & b**

Section-B

Answer the following questions

(2 Marks)

1. Define Computer Network.

- A set of computers connected together for the purpose of sharing resources is called as computer network.

2. Define Internet.

- Internet stands for **INTERnational NETwork** .
- The Internet is a network of global connections – comprising private, public, business, academic and government networks – linked by guided, wireless and fiber-optic technologies.

3. What are the common uses of computer network?

The common uses of computer network are

- Communication
- Resource sharing
- Data (or) software sharing
- Money saving

4. List out some features of mobile network.

- Less consumption of power is used by mobile devices
- Huge capacity than a large transmitter, at single frequency .
- Covering large area than a single transmitter.

5. Difference between wired and wireless networks.

Wired networks	Wireless networks
A Wired network system connected with network cable .	A Wireless network is connecting devices like tablets(tab), indoor cameras and E-readers, etc., without cables (WiFi).
Example: Speakers, CCTV, Printers, etc	Example: Tablets, Indoor, Cameras, etc

Section-C**Answer the following questions****(3 Marks)****1. Define ARPANET.**

- The Advanced Research Projects Agency Network (**ARPANET**) was an early packet-switching network and the first network to implement the TCP/IP protocol suite.
- Both technologies became the technical foundation of the Internet.
- First In 1969, four nodes of ARPANET were connected between four universities using the 50 Kbit/s circuits.

2. What is the usage of cloud storage and cloud computing?

Cloud Storage: Just a storage of data on online, access in different area no geographical limits was in need

Cloud Computing: It is based on Internet computing, to share resources, software and information.

3. What is meant by artificial Intelligence?

- **Artificial intelligence** (AI) is the ability of a computer program or a machine to think and learn.
- Artificial intelligence able to be a better predict traffic as it collects and analyzes data in real time.
- Artificial intelligence will help to maintain, manage, and protect it.

4. List out some usefulness of social networks.

- *Group information sharing over long distances.*
- *Broadcast announcements.*
- *Fostering diversity of thought.*

5. How computer networks saves the money saving?

- Using the computer networking, it's important financial aspect for organization because it saves money.
- It reduces the paper work, man power and save the time.

Section - D**Answer the following questions:****(5 Marks)**

1. Define computer networking and Internet. Explain different developments on computer network and Internet.

Computer Network:

- A set of computers connected together for the purpose of sharing resources is called as computer network.

Internet:

- Internet stands for **INTERNational NETwork**.
- The Internet is a network of global connections – comprising private, public, business, academic and government networks – linked by guided, wireless and fiber-optic technologies.

S. No	Period	Method	History
1	Late 1950	SAGE (Semi – Automatic Ground Environment)	It was used at U.S Military Radar system.
2	1960	Packet switching	Packet switching was developed to transfer the information between computers and network
3	1963	Intergalactic Computer network	Intergalactic Computer network was engaged to access communication with users of computers.
4	1965	Telephone switch	At first widely used Telephone switch was introduced by Western Electric which implemented true computer control.
5	1966	WAN (Wide Area Network)	WAN (Wide Area Network) has been published in the area of time sharing .
6	1969-1970	ARPANET (Advanced Research Projects Agency Network)	The ARPANET was an early packet-switching network and the first network to implement the TCP/IP protocol suite
7	1972	X.25 TCP/IP	Using X.25 as commercial services were deployed then was using an infrastructure for expanding TCP/IP networks .
8	1973	Hosts	Hosts is responsible for reliable delivery of data
9	1973-1979	Ethernet	“Ethernet: Distributed Packet Switching for Local Computer Networks”
10	1976	ARCNET	Data point corporation in which token-passing network was used first to share the storage device in 1976.
11	1995	NEW FIBRE OPTIC CABLES	Ethernet has ability of a quick compatible to support new fiber optic cable speed .

2. Explain the growth of the computer networking.

- Computer network technology was developing over several years included Growth on popularity of cloud storage and cloud computing, downloading and buy digital licenses via Internet.
- Developments on mobile network infrastructure—both deployments of **4G and 3G networks** (older) that have allows the people to use in their developed areas.
- Mobile networking allows people staying connected all the times, via a home network, public WiFi hotspots or smart phones.
- Difficulties faced by the service providers in expanding their residential fiber optic cables Internet service due to **increased competition and installation cost** from other broadband providers.
- Even though **4G LTE** mobile network was **not reached** by many parts of world, the industry of telecommunication started on the development of their next generation “**5G” cellular communication Technology.**
- This **5G** intense to boost up the speed the mobile connections dramatically.
- It might be tested on laboratory on by prototype versions of some elements then it may be standard **5G.**
- Consumers were also interested on the promise of signal coverage with **5G.**



- **Artificial intelligence (AI)** is the ability of a computer program or a machine to think and learn.
- Artificial intelligence able to be a better predict traffic as it collects and analyzes data in real time.
- Artificial intelligence will help to maintain, manage, and protect it.

3. Mention some uses of network at business, home, mobile, social application.

Networks in Business:

- Communications is necessary for successful business operations and business interaction.
- The Internet and wireless communications became full strength for business performed.
- Internet conversations happen faster, Quick Decision making saves a lot of time, and also provides security by limiting user access in cloud computing.
- In business, Direct human interactions are reduced and working environment is also shrink because of Internet.

- Transfer of information across the Internet can be done in any type of business it might be large, small scale or commercial .
- **e-Banking** was a safe, fast, easy and efficient electronic service that enables you to access your bank account all time.

Networks at Home:

- Network at home is a **group of devices** such as computers, mobile, speakers, camera, game system, and printer that connect via network device(router/datacard) with each other.
- A **Wired network** system connected with network cable.
- **Example:** Speakers, CCTV, Printers, etc
- A **Wireless network** is connecting devices like tablets(tab), indoor cameras and E-readers, etc., without cables (WiFi).
- **Example:** Tablets, Indoor, Cameras, etc
- Network at home plays main role to access all such as e-banking, e-learning, e-governance, etc.,

Mobile Networks:

- Mobile network is the network connecting devices **without cable (wireless)**.
- Mobile computers, such as laptop, tablet, and hand held computers, were fastest growing segments.

➤ **Features of Mobile Networks:**

- Less consumption of power
- Huge capacity than a large transmitter, at single frequency.
- Covering large area than a single transmitter.
- Computer knowledge not necessary to access.

Social Application:

- Very fast and easiest way to cover all the people, who they are connected in social network media.
- **For Example:** WhatsApp, Face book, twitter, blogs, pintrest, LinkedIn, classmates and so on.

Usefulness of Social Networks:

- Group information sharing over long distances.
- Broadcast announcements
- Fostering diversity of thought.

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