12th STD

PUBLIC EXAM MAY - 2022

COMPUTER APPLICATIONS

Reg. No.

TIME ALLOWED : 3.00 Hours]   PART - III (with Answers)   [MAXIMUM MARKS : 70

Instructions :
1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
2) Use **Blue** or **Black** ink to write and underline and pencil to draw diagrams

PART - I

Note : (i) **All** questions are **compulsory. (15×1=15)**

(ii) Choose the most appropriate answer from the given **four** alternatives and write the option code and the corresponding answer.

1. Expand JPEG :
   (a) Joint Processor Experts Group
   (b) Joint Photo Exports Gross
   (c) Joint Photographic Expression Group
   (d) Joint Photographic Experts Group

2. Character formatting consists of which of the following text properties?
   (a) Italic   (b) Underline
   (c) Bold   (d) All of the above

3. The _____ diagram gives a logical structure of the database graphically.
   (a) Entity-Role
   (b) Entity-Relationship
   (c) Entity-Database   (d) Entity-Key

4. What is the default extension for PHP?
   (a) .php   (b) .html   (c) .ph   (d) .xml

5. _____ stores more than one value of the same data type in single array variable.
   (a) Indexed array   (b) Array
   (c) Multi-Dimensional array
   (d) Function

6. The loop exclusively used for array is _____.
   (a) for   (b) While
   (c) for each   (d) Do while

7. SQL can be expanded as _____.
   (a) Script Query Language
   (b) Special Query Language
   (c) Server Query Language
   (d) Structured Query Language

8. Which of the following will be an easy way to use Internet and the public telecommunication system to securely share business's information with suppliers, partners and customers?
   (a) Arpanet   (b) Extranet
   (c) Arcnet   (d) Intranet

9. WWW was invented by _____.
   (a) Tim Berners Lee   (b) Blaise Pascal
   (c) John Napier   (d) Charles Babbage

10. **Assertion (A) :** The web-sites of the first wave dotcom companies were only in English.
    Reason (R) : The dotcom companies of the first wave are mostly American companies.
    (a) **(A)** is true and **(R)** is false.
    (b) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**.
    (c) **(A)** is false and **(R)** is true.
    (d) Both **(A)** and **(R)** are correct and **(R)** is not the correct explanation of **(A)**.

11. Pick the odd one in credit card transaction.
    (a) Marketing Manager   (b) Card Holder
    (c) Acquirer   (d) Merchant

12. The websites secured by SSL - Secure Socket Layer protocols can be identified using _____.
    (a) htmls:/ /   (b) html:/ /
    (c) https:/ /   (d) http:/ /

13. The versions of EDIFACT are also called as _____.
    (a) Directories   (b) Message Types
    (c) Folders   (d) Subsets

14. PHP is a _____ programming language.
    (a) Object side   (b) Client side
    (c) File side   (d) Server side

15. Statement which is used to make choice between two options and only option is to be performed is written as:
    (a) then else statement   (b) if statement
    (c) else one statement   (d) if else statement

PART - II

Note : Answer **any six** questions. Q.No. 24 is **compulsory.**   **(6 × 2 = 12)**

16. List out video file formats with exapnsion.

17. Write the Syntax of Switch... case statement in php.

[1]

18. Write the difference between SQL and MYSQL.
19. List out the looping structure in PHP.
20. Write a note on Parameterized functions inPHP.
21. Write the difference between wired and wireless networks.
22. Is PHP a case sensitive language?
23. Differentiate Check box and Radio button.
24. Write the command and shortcut key to cut and paste a block of a document in Abode PageMaker.

PART - III

Note :   Answer **any six** questions. Q.No. **33** is **compulsory**.   **(6 × 3 = 18)**

25. How will you insert page numbers in Master Page?
26. What is the relationship in databases? List its types.
27. Write short notes on PHP operator.
28. Differentiate if statement and if elseif else statement.
29. What is electronic fund transfer?
30. Expand ARPANET, STP and USB.
31. Write any 3 uses of Open Source Network Software.
32. Compare Internet, Intranet and Extranet.
33. Write the output of the following PHP code.
```
<?php>
$S=array(11, 333, 7777);
foreach($S as $V)
      print $V "<br>";
<?>
```

PART - IV

Note :   Answer **all** of the following questions.   **(5 × 5 = 25)**

34. (a) Explain the functions of conditional statements in PHP.
    (OR)
    (b) (i) Define a Text block.
        (ii) How will you create and move a Text Block?
35. (a) Explain the PHP Data Types with examples.
    (OR)
    (b) Compare and contrast Credit Card, Debit Card and Stored Value Card.
36. (a) Write a PHP code to do the following:
    (i) If the given number 'n' is divisible by 3, then print "DIVISIBLE BY 3".
    (ii) Otherwise, check whether the number 'n' is odd or even.
       - if even print "EVEN NUMBER"
       - if odd print "ODD NUMBER"

(OR)
    (b) What is domain name space? Explain.
37. (a) Explain the multi-Dimensional array in PHP with any suitable example program.
    (OR)
    (b) Define a key and primary key. Explain the types of key.
38. (a) Explain the Form Handling methods in PHP.
    (OR)
    (b) Write a PHP code to print all the odd numbers from 3 to 15 using foreach loop.

★★★

Answers

PART - I

1. (d) Joint Photographic Experts Group
2. (d) All of the above
3. (b) Entity-Relationship
4. (a) .php
5. (b) Array
6. (c) for each
7. (d) Structured Query Language
8. (b) Extranet
9. (a) Tim Berners Lee
10. (b) Both (A) and (B) are correct and (R) is the correct explanation of (A).
11. (a) Marketing Manager
12. (c) https: //
13. (a) Directories
14. (d) Server side
15. (d) if else statement

PART - II

16. (i) AVI – Audio / Video Interleave
    (ii) MPEG – Moving Picture Experts Group

17.
```
switch (n) {
    case label1:
        code to be executed if n=label1;
        break;
    case label2:
        code to be executed if n=label2;
        break;
    case label3:
        code to be executed if n=label3;
        break;
    ...
```

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default:
 code to be executed if n is different from all labels;
}

18.

Sl. No.	SQL	MySQL
1.	It is used in the accessing, updating and manipulation of data in a database.	It is an RDBMS that allows keeping the data that exists in a database organized.
2.	SQL is a structured query language.	MySQL is a database software.
3.	SQL does not provide connectors.	MySQL offers an integrated tool called 'MySQL Workbench' to design and develop databases.

19. (i) for Loop
 (ii) foreach Loop
 (iii) While Loop
 (iv) Do While Loop

20. (i) PHP Parameterized functions are the functions with parameters or arguments.
 (ii) Required information can be shared between function declaration and function calling part inside the program.

21.

Wired network	Wireless network
A Wired network system connected with network cable . For example speakers, CCTV, printers, outdoors, and scanners etc., with cables.	A Wireless network is connecting devices like tablets(tab), indoor cameras and E-readers, etc., without cables (WiFi).

22. (i) Yes, PHP is a case sensitive language both upper and lower case are treated differently.
 (ii) Example: $x and $X are different variable names.

23. (i) A checkbox allows the user to select more than one item, while a radio button only can indicate a single selection at a time.

 (ii) Also with a radio button, if the user selects a different choice their previous becomes deselected automatically.

24. The selected text can be easily cut and pasted in the required location.
To cut and paste text .
 1. Select the text to be moved.
 2. Choose Edit > Cut in the menu bar.
 3. Insertion point is moved to the place where the text is to be pasted.
 4. Choose Edit > Paste in the menu bar.
The following keyboard shortcuts can be used to move text
　Ctrl + X → to Cut
　Ctrl + V → to Paste

PART - III

25. (i) Click on Master Pages icon.
 (ii) Then click on Text Tool. Now the cursor changes to I - beam.
 (iii) Then Click on the left Master page where you want to put the page number.
 (iv) Press Ctrl + Alt + P.
 (v) The page number displays as 'LM' on the left master page.
 (vi) Similarly click on the right Master page where you want to put the page number.
 (vii) Press Ctrl + Alt + P.
 (viii) The page number displays as 'RM' on the right master page, but will appear correctly on the actual pages.

26. In ER Model, relationship exists between two entities. Three types of relationships are available and the Entity-Relationship(ER) diagram is based on the three types listed below.
 (i) **One-to-One relationship:** One-to-one (1:1) relationship is said to exist in a relational database design, if 0 or 1 instance of entity A is associated with 0 or 1 instance of entity B, and 0 or 1 instance of entity B is associated with 0 or 1 instance of entity A.
 (ii) **One-to-Many relationship:** One-to-many (1:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many

instances of entity B, but for 1 instance of entity B there exists 0 or 1 instance of entity A.

(iii) **Many-to-Many relationship:** Consider two entities A and B. many-to-many (M:N) relationship is said to exist in a relational database design, for 1 instance of entity A there exists 0 or 1 or many instances of entity B, and for 1 instance of entity B there exists 0 or 1 or many instance of entity A.

27. Operator is a symbol which is used to perform mathematical and logical operations in the programing languages. Different types of operator in PHP are:
   (i) Arithmetic operators,
   (ii) Assignment operators,
   (iii) Comparison operators,
   (iv) Increment/Decrement operators,
   (v) Logical operators, and
   (vi) String operators.

28.

No.	if elseif else statement	if statement
1.	If-elseif-else statement is a combination of if-else statement	If statement executes a single statement
2.	More than one statement can execute the condition based on user needs	Only one statement can execute
3.	If the condition if false more alternatives are there.	If the condition is false, there is no alternative

29. **Electronic Funds Transfer** (EFT) is the "electronic transfer" of money over an online network. The amount sent from the sender's bank branch is credited to the receiver's bank branch on the same day in batches. Unlike traditional processes, EFT saves the effort of sending a demand draft through post and the inherent delay in reaching the money to the receiver. Banks may charge commission for using this service. EFT is a widely used method for moving funds from one account to another in B2B business models.

30. ARPANET - Advanced Research Projects Agency Network
   STP - Shielded Twisted Pair
   USB - Universal Serial Bus

31. **Uses of Open Source Network Software:**
   (i) We can select and use any Open Source Software that suits our needs.
   (ii) The complete options of the software can be used without any cost and restrictions.
   (iii) We can share our ideas with the team, write the required code and share it with many.

32. **Comparison between Internet, Intranet and Extranet**

Type	Definition	Example
Internet	A global network, public TCP/IP network used by over a billion people all over the world	Sending email to a friend
Intranet	A TCP/IP network with access restricted to members of an organization	Accessing your record in the employee personnel file
Extranet	TCP/IP network with restricted access to members	Checking availability of inventory from an outside supplier

33. Syntax error.

PART - IV

34. (a) **Functions of conditional statement in PHP:**
   (i) **If statement in PHP:** If statement executes a statement or a group of statements if a specific condition is satisfied as per the users expectation. This is the simplest PHP's conditional statement and can be written in the following form.
   Syntax:
   if (condition)
   {
        Statement(s);
   }
   (ii) **If else statement in PHP:** The if statement evaluates a condition and executes a set of code if the condition is true and another set of code if the condition is false.
   Syntax:
   if (condition)
   {
   Statement(s) if condition is true;

}
else
{
Statement(s) if condition is false;
}

(iii) **If-elseif-else statement in PHP:** If-elseif-else statement is a combination of if-else statement. Here multiple conditions can be checked and action is based on the result of the condition.

Syntax:
if (Condition 1)
{
Statement(s) if condition 1 is true;
}
elseif(Condition 2)
{
Statement(s) if condition 2 is true;
}
else
{
Statement(s) if both conditions are false;
}

(iv) **Switch case:** The switch case is an alternative to the if.. elseif..else statement which executes a block of code corresponding to the match.

Syntax:
```
switch (n) {
  case label1:
      code to be executed if n=label1;
      break;
  case label2:
      code to be executed if n=label2;
      break;
  case label3:
      code to be executed if n=label3;
      break;
  ...
  default:
      code to be executed if n is different
                      from all labels;
}
```

(OR)

(b)
(i) **Text Block:**
All text in pagemaker resides inside containers called text blocks.

(ii) **To create a text block with the text tool:**
1. Select the text tool (T) from the toolbox. The pointer turns into an I-beam.

2. On an empty area of the page or pasteboard, do one of the following:
Click the I-beam where you want to insert text. (Refer Figure 2.10) This creates a text block to the width of the column or page. By default, the insertion point jumps to the left side of the text block.

3. Type the text you want.
Unlike with a text frame, you do not see the borders of a text block until you click the text with the pointer tool.

Moving a Text Block: To move a block without changing its shape, place the cursor anywhere inside the block, and click and drag it to the required position.

35. (a) PHP scripting language supports 13 primitive data types. Data Types plays important role in all programing languages to classify the data according to the logics. PHP supports the following data types.

(i)   String   (ii)   Integer
(iii) Float   (iv) Boolean
(v)   Array   (vi) Object
(vii) NULL   (viii) Resource

(i) **String :** String is a collection of characters within the double or single quotes like "Computer Application" or 'Computer Application'. Space is also considered as a character.
   Example: $x = "Computer Application!";

(ii) **Integer:** Integer is a data type which contains non decimal numbers.
   Example: $x = 59135;

(iii) **Float:** Float is a data type which contains decimal numbers.
   Example: $x = 19.15;

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

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

OUTPUT:
array(3) { [0]=> string(5) "Computer"   [1]=> string(3) "Laptop" [2]=> string(6)   "Mobile"}

Var_dump: The var_dump() system define function, returns structured information (type and value) about variables in PHP.

(vi) **Object:** PHP object is a data type which contains information about data and function inside the class.

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

(vii) **NULL:** Null is a special data type which contains no value:

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

OUTPUT:

NULL

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

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

(OR)

(b) **Compare and contrast Credit Card, Debit Card and Stored Value Card:**

(i) Credit Card: Credit card is an electronic payment system normally used for retail transactions. A credit card enables the bearer to buy goods or services from a vendor, based on the cardholder's promise to the card issuer to payback the value later with an agreed interest. Every credit card account has a purchase limit set by the issuing bank or the firm. A credit card

is different from a debit card where the credit card issuer lends money to customer instead of deducting it from customer's bank account instantly.

(ii) Debit Card: Debit Card is an electronic payment card where the transaction amount is deducted directly from the card holder's bank account upon authorization. Generally, debit cards function as ATM cards and act as a substitute for cash The way of using debit cards and credit cards is generally the same but unlike credit cards, payments using a debit card are immediately transferred from the cardholder's designated bank account, instead of them paying the money back at a later with added interest. In modern era the use of debit cards has become so widespread.

(iii) Stored Value Card: Stored value card is a type of debit card that is pre-loaded with certain amount(value), with which a payment is made. It is a card that has default monetary value onto it. The card may be disposed when the value is used, or recharged to use it again. The major advantage of stored value card is that customers don't need to have a bank account to get prepaid cards.
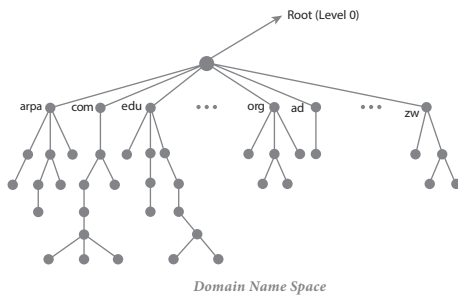
36. (a)
(i)
```php
<?php
$n = readline ("Enter the number");
if ($n% 3 = = 0)
{
echo "Divisible by 3";
}
?>
```

(ii)
```php
<?php
$n = readline ("Enter the number");
if ($n% 2 = = 0)
{
echo "EVEN NUMBER";
}
else
    {
        echo "ODD NUMBER";
    }
?>
```
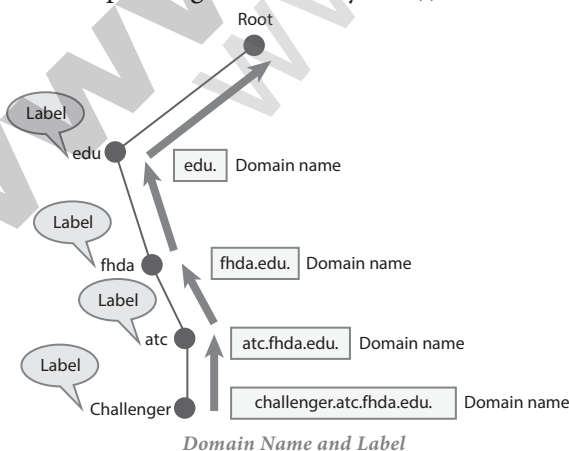
(OR)

(b) **Domain Name Space :**

Domain Name Space

(i) Domain name space was designed to achieve hierarchical name space. In this, the names are represented as a tree like structure with root element on the top and this tree can have a maximum of 128 levels starting from root element taking the level 0 to level 127.

(ii) The above figure represent the domain name space where the root element is present at the top most level i.e., level 0.

(iii) The root element always represents the NULL string (empty string). The next level to the root element is node (children of root element). Each node in the tree has a label and a domain name.

Label :

(i) It is a string which can have maximum of 63 characters. Each node in that level should have different labels thereby assuring the individuality of the domain name.

(ii) In other words, Labels are the names given to domains. Domain is a sub tree in domain name space tree structure. The domain can be further divided into sub domains.

(iii) The domain name which is obtained by reading the labels from bottom to top, separating each label by dot (.).

Domain Name and Label

Domain name :

(i) It is the sequence of labels. In domain name the sequence of labels are separated by dot (.).

(ii) The domain name is always read from the lower level to higher level i.e., from the leaf node to root node. Since the root node always represent NULL string, all the domain name ending with dot.

37. (a) **Multi dimensional array in PHP:**

(i) A multidimensional array is an array containing one or more arrays.

(ii) PHP understands multidimensional arrays that are two, three, four, five, or more levels deep.

(iii) However, arrays more than three levels deep are hard to manage for most people.

Example:

```php
<?php
// A two-dimensional array
$student=array
(
array("Iniyan",100,96),
array("Kavin",60,59),
array("Nilani",131,139)
);

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>";
?>
```

(OR)

(b) The candidate key that is chosen to perform the identification task is called the primary key and any others are Alternate keys. Every tuple must have, by definition, a unique value for its primary key. A primary key which is a combination of more than one attribute is called a composite primary key.

Foreign Key:

A foreign key is a "copy" of a primary key that has been exported from one relation into another to represent the existence of a relationship between them. A foreign key is a copy of the whole of

its parent primary key i.e if the primary key is composite, then so is the foreign key. Foreign key values do not (usually) have to be unique. Foreign keys can also be null. A composite foreign key cannot have some attribute(s) null and others non-null.

Super Key:

An attribute or group of attributes, which is sufficient to distinguish every tuple in the relation from every other one is known as Super Key. Each super key is called a candidate key. A candidate key is selected from the set of Super Key. While selecting candidate key, redundant attributes should not be taken. The candidate key is also known as minimal super keys.

Composite Key:

A key with more than one attribute to identify rows uniquely in a table is called Composite key. This is also known as Compound Key.

38. (a) **PHP Basic Form Handling :**

(i) When the user keys in the input data in HTML controls and clicks the submit button the request will be generated and reaches a PHP file which is mentioned in the FORM tag under the Action attribute.

(ii) All the input values are synchronized and sent to the server via POST method or GET method. Method is an attribute form tag in HTML.

(iii) Once the data reaches the server, two PHP variables such as $_POST and $_GET collects the data and prepares the response accordingly.

Post Method: The input data sent to the server with POST method is stored in the request body of the client's HTTP request.

Get Method: The input data sent to the server with POST method via URL address is known as query string. All input data are visible by user after they clicks the submit button.

Example:

Test.html:

```
<html>
<body>
<form action="welcome.php" method="post">
Name: <input type="text" name="name"><br>
```
E-mail: <input type="text" name="email">

```
<input type="submit">
</form>
</body>
</html>
```

Welcome.php:

```
<html>
<body>
Welcome <?php echo $_POST["name"]; ?><br>
Your email address is: <?php echo $_POST["email"]; ?>
</body>
</html>
```

Output

Name: sethuraman
E-mail: srssethuraman@gamail.com
Submit

Output
Welcome sethuraman
Your email address is: srssethuraman@gamail.com

Login module

(i) HTML File contains two Text Box (Name and Email), One Button and one form tag. The remote server PHP file (welcome.php) is mentioned in form tag under the Action Attribute.

(ii) In "Welcome.Php" file, PHP variables such as $_POST and $_GET collects the data and prepares the response accordingly.

(iii) Eventually the user will receive the output response in the client machine's browser screen.

(OR)

(b)
```
<?php
$a = range (3, 15);
foreach ($a as $v) {
if (($v%2) !=0) {
echo "$v";
}
}
?>
```

★★★