

12<sup>th</sup>  
STD

PUBLIC EXAMINATION - MARCH 2024

Reg. No.

PART - III

TIME ALLOWED : 3.00 Hours]

COMPUTER APPLICATIONS (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) Answer **all** the questions. (15 × 1 = 15)

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

1. AIFF file format was developed by \_\_\_\_\_  
(a) Apple Inc. (b) TCS  
(c) IBM (d) MicroSoft
2. Identify the data query language command used to retrieve the data from database.  
(a) Delete (b) Insert  
(c) Select (d) Update
3. Which statement is used to show the output of a string or other data in the screen in PHP ?  
(a) for (b) switch (c) while (d) echo
4. Which of the following is used to terminate from the switch statement ?  
(a) goto (b) break  
(c) return (d) continue
5. What is the output of the following code?  
for(\$i=5; \$i>=1; \$i- -)  
{  
    echo \$i."<br>";  
}  
(a) 5432 (b) 12345 (c) 1234 (d) 54321
6. Which of the following is the correct function for closing connection in PHP ?  
(a) mysql\_close ("Connection Object");  
(b) mysqli\_close("Connection Object");  
(c) mysqli\_close("Database Object");  
(d) close ("Connection Object");
7. In mobile network, land areas for network coverage was distributed as \_\_\_\_\_.  
(a) Range (b) Cells  
(c) Service (d) Transceiver
8. How many bits are used in the IPv6 addresses?  
(a) 128 (b) 32 (c) 16 (d) 64
9. Which of the following Connector is called as Champ Connector?  
(a) RJ14 (b) RJ11 (c) RJ45 (d) RJ21
10. Place option is present in \_\_\_\_\_ menu.  
(a) Layout (b) File  
(c) Window (d) Edit
11. Expansion of SME is :  
(a) Sound Messaging Enterprises  
(b) Small and Medium-sized Enterprises  
(c) Short Messaging Enterprises  
(d) Simple and Medium Enterprises
12. Which of the following is correctly matched ?  
(a) Stored value card - Pay later  
(b) Credit card - Pay before  
(c) Smart card - Pay any time  
(d) Debit card - Pay now
13. Root name server are maintained by \_\_\_\_\_.  
(a) WHO (b) IANA  
(c) DNS (d) ICANN
14. Which of the following is not a security element involved in E-Commerce ?  
(a) Phishing (b) Authenticity  
(c) Privacy (d) Confidentiality
15. A user-defined function in PHP starts with the keyword \_\_\_\_\_.  
(a) defined (b) function  
(c) funct (d) def

[ 1 ]

**PART - II**

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

16. List out the audio file formats.
17. Write short note on Cardinality in Data Base Management System.
18. How do you call a function in PHP ?
19. What are the common uses of computer network?
20. Write short note on NS<sub>2</sub>.
21. List out any two DDL and DML commands with its Syntax.
22. What are the layers available in TCP/IP reference model?
23. Differentiate - while loop and do ... while loop in PHP.
24. Write the syntax to open file function in PHP with an example.

**PART - III**

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

25. List few types of business documents that are transmitted through EDI.
26. Write a note on B2B module in E-commerce.
27. Briefly explain any two E-commerce security threats.
28. Write about Null Modem Cable.
29. How do you rejoin split blocks in PageMaker ?
30. Briefly explain the stored value card and its types.
31. List the various layers of EDI.
32. Write MySQLi connection syntax with example.
33. What will be the output of the following in PHP code ?

```
<?php
$array = array("a" => 10, "b" => 20, "c" => 30);
foreach ($array as $key => $value) {
    echo $key . " => " . $value . "<br>";
}
?>
```

**PART - IV**

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

34. (a) Write the steps to draw a star using Polygon tool.  
(OR)  
(b) Briefly explain various types of EDI.

35. (a) Explain the components used in Ethernet cabling.  
(OR)  
(b) Differentiate open source and proprietary software.
36. (a) List the basic concepts of E-R model with suitable example.  
(OR)  
(b) Explain how the DNS is working.
37. (a) Explain authentication protocols.  
(OR)  
(b) Explain user defined function concepts in PHP with suitable examples.
38. (a) Explain in detail about the roles of Multimedia production team and their responsibilities.  
(OR)  
(b) Explain 'for' looping structure with example.

**Answers****PART - I**

1. (a) Apple Inc.
2. (c) Select
3. (d) echo
4. (b) break
5. (d) 54321
6. (b) mysqli\_close("Connection Object");
7. (b) Cells
8. (a) 128
9. (d) RJ21
10. (b) File
11. (b) Small and Medium-sized Enterprises
12. (d) Debit card - Pay now
13. (d) ICANN
14. (a) Phishing
15. (b) function

**PART - II**

16. (i) WAV – Waveform Audio File Format  
(ii) MP3 – MPEG Layer - 3 Format  
(iii) OGG  
(iv) AIFF – Audio Interchange File Format  
(v) WMA – Windows Media Audio  
(vi) RA – Real Audio Format

17. Cardinality is defined as the number of items that must be included in a relationship (i.e) number of entities in one set mapped with the number of entities of another set via the relationship. The three classifications in Cardinality are one-to-one, one-to-many and Many-to-Many.
18. Calling a function is another name for executing the function. A function is called simply by using the function name, along with an argument list, as a statement.  
**Syntax**  
functionName( );  
(or)  
functionName(argument list);
19. The common uses of computer network are  
(i) Communication  
(ii) Resource sharing  
(iii) Information sharing
20. NS2 is the abbreviation of NETWORK SIMULATOR version 2. It was considered explicitly for exploration in network communication and event-driven open-source simulator in computer.
21. **DDL Commands :**  
(i) CREATE  
**Syntax :** CREATE database databasename;  
(ii) DROP  
**Syntax :** DROP database databasename;  
**DML Commands :**  
(i) INSERT  
**Syntax :** INSERT INTO tablename  
(column1, column2, column 3)  
VALUES: (Value 1, value 2, value3);  
(ii) UPDATE  
**Syntax :** UPDATE tablename  
SET column 1 = "new value"  
Where column2="value2";
22. There are four total layers of TCP/IP protocol,  
(i) Network Access Layer  
(ii) Internet Layer  
(iii) Transport Layer  
(iv) Application Layer
23. In PHP, the while loop and the do...while loop are both used to execute a block of code multiple times while a certain condition is true. However, there are some differences between these two looping structures:  
(i) **Execution order**  
The do...while loop first executes the code block and then evaluates the condition. If the condition is true, the code block is executed again. If the condition is false, the loop is terminated.  
(ii) **Minimum number of iterations**  
The while loop may not execute the code block at all if the condition is false from the beginning.  
The do...while loop, on the other hand, guarantees that the code block will be executed at least once, even if the condition is false.
24. **PHP open a file:**  
**Syntax:**  
\$file\_Object= fopen("FileName", "Read/WriteMode") or die("Error Message!");  
**Example:**  
<?php  
\$myfile = fopen("Student.txt", "r")  
or die("Unable to open file!");  
?>
- PART - III**
25. (i) Delivery notes  
(ii) Invoices  
(iii) Purchase orders  
(iv) Advanceship notice  
(v) Functional acknowledgements
26. (i) In B2B E-Commerce, commercial transactions take place between different business organizations, through the Internet.  
(ii) For example, a cycle company may buy tyres from another company for their cycles.  
(iii) When compared to other models, the value per transaction in B2B transaction is high, because of bulk purchases.  
(iv) The company also might get the advantage of discounts on bulk purchases.

- (v) Out-sourcing and Off-shoring are generally associated with B2B E-Commerce.
- (vi) If a company's work is hired to another company, it would be termed as out-sourcing.
27. (i) **Tampering:** E-Commerce has the problem of the authenticity and integrity of business information. When hackers grasp the data transmitted on the network, it can be falsified in the middle through various technical means, and then sent to the destination, thereby destroying the authenticity and integrity of the data.
- (ii) **Payment frauds:** Payment frauds have subsets like Friendly fraud (when customer demands false reclaim or refund), Clean fraud (when a stolen credit card is used to make a purchase) Triangulation fraud (fake online shops offering cheapest price and collect credit card data) etc.
28. (i) A cable interconnecting two devices directly is known as a null modem cable.
- (ii) The crossover Ethernet cable is an example of the null modem cables.
- (iii) Rs-232 cable is also used for interconnecting two computers without modem.
29. To rejoin the two text blocks
- (i) Place the cursor on the bottom handle of the second text block, click and drag the bottom handle up to the top.
- (ii) Then place the cursor on the bottom handle of the first text block, and click and drag the bottom handle down if necessary.
30. 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. There are two varieties for stored value card.
- (i) **Closed loop (single purpose) :** Eg.: Chennai metro rail travel card.
- (ii) **Open loop (multipurpose) :** Eg.: Visa gift cards.
31. Electronic data interchange architecture specifies four different layers namely
- Semantic layer
  - Standards translation layer
  - Transport layer
  - Physical layer
32. **Syntax :**  
`mysqli_connect("Server Name","User Name",  
"password","DB Name");`
- Example :**
- ```
<?php
$servername = "localhost";
$username = "username";
$password = "password";
$db_name = "School_DB";
//Create connection
$conn = mysqli_connect($servername,
$username, $password, $db_name);
```
33. **Output :**
- $a \Rightarrow 10$
  - $b \Rightarrow 20$
  - $c \Rightarrow 30$
- PART - IV**
34. (a) **Drawing a star using polygon tool:**  
**To draw a Star**
- Click on the **Polygon tool** from the toolbox. The cursor changes to a **crosshair**.
  - Click and drag anywhere on the screen. As you drag, a Polygon appears.
  - Release the mouse button when the Polygon is of the desired size.
  - Choose Element  $\rightarrow$  Polygon Settings in the menu bar. Now Polygon Settings dialogue box appears.
  - Type 5 in the Number of sides text box.
  - Type 50% in Star inset textbox.
  - Click OK. Now the required star appears on the screen.
- (OR)**
- (b) The types of EDI were constructed based on how EDI communication connections and the conversion were organized. Thus based on the medium used for transmitting EDI documents the following are the major EDI types.
- Direct EDI



- (ii) EDI via VAN
- (iii) EDI via FTP/VPN, SFTP, FTPS
- (iv) Web EDI
- (v) Mobile EDI

1. **Direct EDI/Point-to-Point** : It is also called as Point-to-Point EDI. It establishes a direct connection between various business stakeholders and partners individually. This type of EDI suits to larger businesses with a lot of day to day business transactions.
2. **EDI via VAN** : EDI via VAN (Value Added Network) is where EDI documents are transferred with the support of third party network service providers. Many businesses prefer this network model to protect them from the updating ongoing complexities of network technologies.
3. **EDI via FTP/VPN, SFTP, FTPS** : When protocols like FTP/VPN, SFTP and FTPS are used for exchange of EDI based documents through the Internet or Intranet it is called as EDI via FTP/VPN, SFTP, FTPS.
4. **Web EDI** : Web based EDI conducts EDI using an web browser via the Internet. Here the businesses are allowed to use any browser to transfer data to their business partners. Web based EDI is easy and convenient for small and medium organizations.
5. **Mobile EDI** : When smartphones or other such handheld devices are used to transfer EDI documents it is called as mobile EDI. Mobile EDI applications considerably increase the speed of EDI transactions.

35. (a) The four main components used in the Ethernet cabling components are

1. Patch Cable (Twisted pair)
2. RJ45 Connector
3. Ethernet Ports
4. Crimping Tool

**Patch Cable (Twisted Pair):**

- (i) These Cables are generally made up of 8 wires in different colors. Four of them are solid colours, and the others are striped.

- (ii) Ethernet cables are normally manufactured in several industrial standards such as Cat 3, Cat 5, Cat 6, Cat 6e and cat 7. "Cat" simply stands for "Category," and the following number indicates the version.
- (iii) Latest version denotes faster and higher frequencies, measured in Mhz.

**RJ45 Connector:**

- (i) The RJ45 connector looks similar like a telephone jack but it looks a slightly wider. In RJ45 the "RJ" stands for the Registered Jack and the "45" simply refers to the interface standard.
- (ii) The RJ45 connector is a small plastic cube. It has eight pins.
- (iii) It is connected to each end of the Ethernet cable. It is also known as 8P8C connector.

**Ethernet Port:**

- (i) Ethernet port is an opening which is a part of an Ethernet card. It accepts RJ45 connector with Ethernet cable.
- (ii) It is found on personal computers, laptops, routers, switches, hubs and modems.
- (iii) Once you inject the plug into the port the two led lights will glow in the computer, one is green and another one is orange. The orange light will start blinking which indicates that the Internet is connected.

**Crimping Tool:**

- (i) Crimping is the process of joining two or more pieces of wire to hold each other.
- (ii) The crimping tool is a physical tool which is used to connect the patch wire and the Ethernet connector.
- (iii) The crimping tool looks like a small cutting handle with two mould of Ethernet port

(OR)

(b)

| No. | Open Source Software                                                              | Proprietary Software                                                                                    |
|-----|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1.  | It refers to the software that is developed and tested through open collaboration | It refers to the software that is solely owned by the individual or the organization that developed it. |

|    |                                                                                                |                                                                                                   |
|----|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 2. | Anyone with the academic knowledge can access, inspect modify and redistribute the source code | Only the owner or publisher who holds the legal property rights of the source code can access it. |
| 3. | The project is managed by an open source community of developers and programmers.              | The project is managed by a closed group of individuals or team that developed it.                |
| 4. | They are not aimed at unskilled users outside of the programming community                     | They are focused on a limited market of both skilled and unskilled and users                      |
| 5. | It provides better flexibility which means more freedom which encourages innovation            | There is a very limited scope of innovation with the restrictions and all                         |
| 6. | <b>Examples:</b> Android, Firefox, Libreoffice, Ubuntu, Gnome etc.,                            | <b>Examples:</b> Windows, mac Os, iTunes, Google earth, Adobe flash etc.                          |

36. (a) **ER Modeling basic concepts:** The basic concepts of ER model consists of  
 1. Entity or Entity type  
 2. Attributes 3. Relationship

**1. Entity or Entity type :**

- (i) An Entity can be anything a real-world object or animation which is easily identifiable by anyone even by a common man.
- (ii) **Eg:** In a company's database Employee, HR, Manager are considered as entities, where each of these entity will be having their own attributes. An entity is represented by a rectangular box.

|          |         |
|----------|---------|
| Employee | Manager |
|----------|---------|

Types of Entity :

- (a) Strong Entity
  - (b) Weak Entity
  - (c) Entity Instance
2. **Attributes:** An attribute is the information about that entity and it will describe, quantify, qualify, classify, and specify and entity. An attribute will always have a single value, that value can be a number or character or string.

**Types of attributes :**

- (i) Key Attribute
- (ii) Simple Attributes
- (iii) Composite Attributes
- (iv) Single Valued Attribute
- (v) Multi Valued Attribute

3. **Relationship Type:** 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.

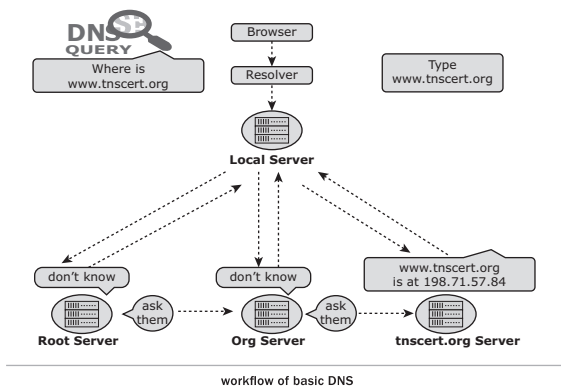
- (i) One-to-One relationship
- (ii) One-to-Many relationship
- (iii) Many-to-Many relationship

In reality one-to-one are in less usage, where as one-to-many and many-to-many are commonly used. However in relational databases, many-to-many are converted into one-to-many relationships.

(OR)

**(b) EDNS Works :**

- (i) When the user enters the URL in the browser, the system first checks its DNS cache for the corresponding IP address.
- (ii) If the IP address is found in the cache, then the information is retrieved from cache.
- (iii) If not, the system needs to query the resolver about the IP address from Internet Service Provider (ISP).
- (iv) Each resolver has its own cache and if it is found in that then that information is retrieved.
- (v) If not, then the query is passed to next domain server i.e., TLD (Top Level Domain) which reviews the request and direct the query to name servers associated with that specific domain.
- (vi) Until the query is solved it is passed to next level domains. Finally, the IP address is detected and the corresponding record is sent to the resolver.
- (vii) Then the resolver returns the record back to the computer browser. Now the user can view the weppages for the detected IP address.



37. (a) At present, there are two kinds of security authentication protocols widely used in E-Commerce, namely Secure Electronic Transaction (SET) and Secure Sockets Layer (SSL).

#### Secure Electronic Transaction :

- Secure Electronic Transaction (SET) is a security protocol for electronic payments with credit cards, in particular via the Internet.
- SET was developed in 1996 by VISA and MasterCard, with the participation of GTE, IBM, Microsoft and Netscape.
- The implementation of SET is based on the use of digital signatures and the encryption of transmitted data with asymmetric and symmetric encryption algorithms.
- SET also use dual signatures to ensure the privacy.

#### Secure Sockets Layers

- The most common Cryptographic protocol is Secure Sockets Layers (SSL). SSL is a hybrid encryption protocol for securing transactions over the Internet.
- The SSL standard was developed by Netscape in collaboration with MasterCard, Bank of America, MCI and Silicon Graphics.
- It is based on a public key cryptography process to ensure the security of data transmission over the internet.
- Its principle is to establish a secure communication channel (encrypted) between a client and a server after an authentication step.

- Today, all browsers in the market support SSL, and most of the secure communications are proceeded through this protocol. SSL works completely hidden for the user, who does not have to intervene in the protocol.
- The only thing the user has to do is make sure the URL starts with https:// instead of http:// where the "s" obviously means secured. It is also preceded by a green padlock.

(OR)

- (b) A user defined function by using the 'function' keyword, followed by the name of the function and a set of parentheses.

The general syntax for creating a function in PHP:

Function definition (or declaration)

#### Syntax

```
function functionName([parameter list])
```

```
{
    // code to be executed
}
```

#### Explanation :

- The 'function' keyword is used to define a function.
- functionName is the name of the function. It can be any valid PHP identifier, as long as it is not a reserved word.
- parameter list is a comma-separated list of variables. These parameters are optional and we can have as many or as few as we like.
- Inside the curly braces, we can put any code we want the function to execute. This can include PHP statements, loops, conditions, and so on.

#### Example:

```
<? PHP
function Datainput ( )
{
    echo "students details inserted successfully"
}
Datainput ( ) :
? >
```

**38. (a) Roles of Multimedia production team and their responsibilities.****1. Production Manager:**

- (i) In a multimedia production, the role of production manager is to define, and coordinate, the production of the multimedia project in time and with full quality.
- (ii) The production manager should be an expertise in the technology, good at proposal writing, good communication skills and budget management skills.

**2. Content Specialist :**

- (i) Content specialist is responsible for performing all research activities concerned with the proposed application's content.
- (ii) Program content refers to projects information, graphics, data or facts presented through the multimedia production.

**3. Script Writer :**

- (i) Video and film scripts represents a linear sequence of events.
- (ii) The script writer visualizes the concepts in three dimensional environment and if needed uses the virtual reality integration into the program.

**4. Text Editor :**

- (i) The content of a multimedia production always must flow logically and the text should always be structured and correct grammatically.
- (ii) Text and narration is an integrated part of the application.

**5. Multimedia Architect :** The multimedia architect integrates all the multimedia building blocks like graphics, text, audio, music, video, photos and animation by using an authoring software.

**6. Audio and Video Specialist :**

- (i) The roles of these specialists are needed for dealing with narration and digitized videos to be added in a multimedia presentation.
- (ii) They are responsible for recording, editing sound effects and digitizing.

(OR)

(b) 'for loop' is called as the entry-check loop.

The for loop is used to execute a block of code a specific number of times.

**Syntax:**

```
for (initialization; condition; increment /
                                     decrement)
{
    //code to be executed;
}
```

The initialization part is executed only once at the beginning of the loop. It is used to initialize variables. The condition is evaluated before each iteration of the loop. If it is true, the code block is executed. If it is false, the loop is terminated. The increment/ decrement part is executed after each iteration of the loop. It is used to update variables.

**Example 1**

To print the numbers from 1 to 5 in ascending order

```
for ($i = 1; $i <= 5; $i++)
{
    echo $i . "<br>";
}
```

**Output :**

1  
2  
3  
4  
5

**Example 2**

To print the numbers from 5 to 1 in descending order

```
for ($i = 5; $i <= 1; $i--)
{
    echo $i . "<br>";
}
```

**Output :**

5  
4  
3  
2  
1

