12th COMPUTER APPLICATION

Important 5 Marks Questions and Answers:

Chapter-1

1.Explain in detail about production team Roles and Responsibilities?

Text Editor:

The content of a multimedia production always must flow logically and the text should always be structured and correct grammatically.

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.

Computer Graphic Artist:

The role of Computer Graphic Artist is to deal with the graphic elements of the programs like backgrounds, bullets, buttons, pictures editing, 3-D objects, animation, and logos etc.

Audio and Video Specialist:

They are responsible for recording, editing sound effects and digitizing.

Content Specialist:

Content specialist is responsible for performing all research activities concerned with the proposed application's content.

Chapter-2

1. **Write the steps to draw a star using polygon tool?**

   Answer:

   Drawing a Star using Polygon tool

   To draw a Star

(i) Click on the Polygon tool from the toolbox.

The cursor changes to a crosshair.

(ii) Click and drag anywhere on the screen. As you drag, a Polygon appears.

(iii) Release the mouse button when the Polygon is of the desired size.

(iv) Choose Element > Polygon Settings in the menu bar.

Now Polygon Settings dialogue box appears.

(v) Type 5 in the Number of sides text box.

(vi) Type 50% in Star inset textbox.

(vii) Click OK. Now the required star appears on the screen.

1.**Explain the tools in PageMaker toolbox?**
Answer:

Tool	Toolbox	Cursor	Use
Pointer Tool	▲	▲	Used to select, move, and resize text objects and graphics.
Text tool	T	⌶	Used to type, select, and edit text.
Rotating tool	↻	✴	Used to select and rotate objects. SamacheerKalvi.Guru
Cropping tool	🔪	🔪	Used to trim imported graphics.
Line tool	╲	+	Used to draw straight lines in any direction.
Constrained line tool	⊢	+	Used to draw vertical or horizontal lines.
Rectangle tool	▭	+	Used to draw squares and rectangles.
Rectangle frame tool	⊠	+	Used to create rectangular placeholders for text and graphics.
Ellipse tool SamacheerKalvi.Guru	◯	+	Used to draw circles and ellipses.
Ellipse frame tool	⊗	+	Used to create elliptical placeholders for text and graphics.
Polygon tool	⬡	+	Used to draw polygons.
Polygon frame tool	⬡	+	Used to create polygonal placeholders for text and graphics.
Hand tool	✋	✋	Used to scroll the page (an alternative to the scroll bar)
Zoom tool	🔍	🔍	Used to magnify or reduce an area of the page.

Chapter-4

1. Discuss in detail about PHP data types?

Answer:

PHP Data type:

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.

- String
- Integer
- Float
- Boolean
- Array
- Object
- NULL
- Resource

1**. 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!";

2**. Integer**:

Integer is a data type which contains non decimal numbers.

Example:

$x = 59135;

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

3**. Float:**

Float is a data type which contains decimal numbers.

Example:

$x = 19.15;

4. **Boolean**:

Boolean is a data type which denotes the possible two states, TRUE or FALSE

Example:

$x = true;

$y = false;

5. **Array:**

Array is a data type which has multiple values in single variable.

Example:

Scars = array("Computer","Laptop","Mobile");

7**. NULL:**

Null is a special data type which contains a single,value: NULL

<?php $x = null;

?>

OUTPUT:

NULL

8. **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

// Open a file for reading

$handle = fopen("note.txt", "r");

var_dump($handle);

echo "<br>";

?>

Chapter-5

1**. Discuss in detail about User defined Functions?**

Answer:

User Defined Function:

1. User can create their own functions.
2. User Defined Function (UDF) in PHP gives a privilege to user to write own specific operation inside of existing program module.
3. Two important steps the Programmer has to create for users define Functions are:

Function Declaration:

A user-defined Function declaration begins with the keyword **"function".** User can write 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( ); // call the function
?>
```

Parameterized Function:

1. Required information can be shared between function declaration and function calling part inside the program.

2. The parameter is also called as arguments, it is like variables.

3. 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.

Chapter-6

1. Discuss in detail about Switch statement with an example?
   Answer:
   Switch Case:
   - The switch statement is used to perform different actions based on different conditions.
   - Switch statement tests only for equality.
   - More case values can be given.
   - When all the case values are not matched, then default will be executed.

Syntax:

```
switch (n)

{
case label 1:
code to be executed if n=labe11;
break;
case labe12:
code to be executed if n=labe12;
break;
case labe13:
code to be executed if n=labe13; ,
break;
…….
default:
code to be executed if n is different from all labels;
}
```

Chapter-7

1. Write a PHP code to print 10 to 20 numbers in ascending order using **while loop** and **do…while loop.**
   Answer: while loop

```php
<?php
$number = 10;
while ($number <= 20)
{
echo "$number <br>";
$number++;
}
?>
```

OUTPUT:
10
11
12
13
14
15
16
17
18
19
20

   Do…while loop:

```php
<?php
$number = 10;
do
{
echo "$number <br>";
$number++;
}while ($number <= 20)
?>
```

1. Discuss in detail about For each loop?
   Answer:
   For each Loop:
   Foreach loop is exclusively available in PHP. It works only with arrays. The loop iteration deepens on each KEY Value pair in the Array. For each, loop iteration the value of the current array element is assigned to $value variable and the array pointer is shifted by one, until it reaches the end of the array element.
   Syntax:

```php
for each ($array as Svalue)
{
code to be executed;
}
```

   The foreach construct provides an easy way to iterate over arrays, foreach works only on arrays and objects, and will issue an error when you try to use it on a variable with a different data type or an uninitialized variable.
   Example:

```php
<?php
$Student_name = array("Magilan", "Iniyan","Nilani", "Sibi", "Shini");
foreach ($Student_name as $value)
{
echo "$value <br>";
}
?>
```

Chapter-8

1. Discuss in detail about HTML form controls?
   Answer:
   Basic HTML Form Controls
   The following control types are available in HTML form controlling:

1. Text inputs

2. Buttons

3. Checkbox

4. Radio box

5. File Select

6. Form Tag

Example of HTML form Page

1. Text inputs contain textbox and text area controls.

2. Buttons may contain Submit button, Reset button and Cancel Button.

3. Checkbox is the important feature which selects more than one value from the HTML form.

4. Radio box is similar to checkbox but one value can be chosen at a time.

5. File select is the best feature to select one file from the local machine to server machine at a time.

6. Form tag is used to mention a method (POST or GET) and control the entire form controls in the HTML document.

Chapter-9

7. Discuss in detail about MySQL functions with example?
Answer:
MySQL Function in PHP:
In PHP Scripting language many functions are available for MySQL Database connectivity and executing SQL queries. MySQLi is extension in PHP scripting language which gives access to the MYSQL database. MySQLi extension was introduced version 5.0.0.

The MySQLi extension contains the following important functions which are related to MySQL database connectivity and management.

1. Mysqli_connect( ) Function

2. Mysqli_close( ) Function

3. mysqli_select_db( ) Function

4. mysqli_affected_rows( ) Function

5. mysqli_connect_error( ) Function

6. mysqli_fetch_assoc( ) Function

1**. 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.

2. **Managing Database Connections:**
The below code snippet describes managing database connection methods and features.

```
<?php
$servemame = "localhost";
$usemame = "username";
$password = "password";
$DB_name = "School_DB";
// Create connection
$conn = mysqli_connect($servemame, Susemame, $password,$DB_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**. Performing Queries:**
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, "mysqliquery" 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);

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

Chapter-10

1. Explain the uses of Computer Network.

Answer:

- **Communication:** Through computer networks individuals and organizations can collaborate using communicational channels that may include email, chat, and video conferencing.

- **Resource sharing:** These bags are a boon to users since they provide a way to share the printer, scanner, and files, which will help to improve work activities and reduce costs.

- **Remote access:** Network technologies bring the power of information and assistance by making it accessible from anywhere on the globe. Hence, this enables users to operate with more freedom and comfort.

- **Collaboration:** Networks function to make collaboration gin and tonic by offering the opportunities to work jointly on something, share thoughts, and critique in the biggest way.

- **E-commerce:** Online sales and payments processing are empowered with the computer networks, that enable businesses to sell products online and execute secure payments.

- **Education:** From their use in the educational setting they are employed to provide a basis for distance learning, access to resources of higher education and give opportunity for collaboration among students and teachers.

- **Entertainment:** Networks are applied to matters of entertainment like online gaming, online film and music streaming, and social networking.

2. Explain about social applications in Computer Network.

Answer:

There are multiple applications of computer networks including:

- **Business applications:** Computer networks are often used by businesses to ensure impact communication, to share resources, and to allow their employees to access the whole system and applications from remote locations**.**

- **Educational applications:** Online networks are widely employed in educational institutions allowing students to access educational possibilities, share knowledge, and collaborate with their professors.

- **Healthcare applications:** The healthcare sector has benefited a lot from the computer networks, which are used to store and share patient details thus allowing healthcare providers to provide more personalized treatment.

- **Entertainment applications:** Besides that with computer networks, you can entertain yourself with online games, streaming movies and music, or utilization of social media.

- **Military applications:** Military networks are often closed and not used for general communication, which ensures the safety of military information**.**

- **Scientific applications**: Scientific research heavily depends on computer networks because they will help establish collaboration among researchers and facilitate the sharing of data and information.

- **Transportation applications:** Computer networks are used to monitor a transit system in various ways, by managing the traffic, tracking vehicles as well as even improving efficiency in transportation.

- **Banking and finance applications:** The banks and finance sector are the biggest users of computer networks to carry out transactional processing, information sharing, and the provision of secure access to financial services.

Chapter-11

1.Discuss about OSI model with its layers?
Answer:
OSI Model:
Open System Interconnection (OSI) model was found in the year 1934, general framework that enables

network protocols along with software and systems to be developed based on general set of guidelines. It describes the standards for the inter-computer communication.

	OSI Layer	TCP/IP	Datagrams are called
Software	**Layer 7** Application	HTTP, SMTP, IMAP, SNMP, POP3, FTP	**Upper Layer Data** SamacheerKalvi.Guru
	Layer 6 Presentation	ASCII Characters, MPEG, SSL, TSL, Compression (Encryption & Decryption)	
	Layer 5 Session	NetBIOS, SAP, Handshaking connection	
	Layer 4 Transport	TCP, UDP	**Segment**
	Layer 3 Network	IPv4, IPv6, ICMP, IPSec, MPLS, ARP	**Packet**
Hardware	**Layer 2** Data Link	Ethernet, 802.1x, PPP, ATM, Fiber Channel, MPLS, FDDI, MAC Addresses	**Frame**
	Layer 1 Physical	Cables, Connectors, Hubs (DLS, RS232, 10BaseT, 100BaseTX, ISDN, T1)	**Bits**

OSI LAYERS

OSI Layers:
(i) Physical Layer:
This is the 1st layer, it defines the electrical and physical specifications for devices.

(ii) Data Link Layer:
It is the 2nd layer and it guarantees that the data trAnswer:mitted are free of errors. This layer has simple protocols like "802.3 for Ethernet" and "802.11 for Wi-Fi".

(iii) Network Layer:
It is the 3rd layer determining the path of the data packets. At this layer, routing of data packets is found using IP Addressing.

(iv) Transport Layer:
It is the 4th layer that guarantees the trAnswer:portation/sending of data is successful. It includes the error checking operation.

(v) Session Layer:
It is the 5th layer, identifies the established system session between different network entities. It controls dialogues between computers. For instance, while accessing a system remotely, session is created between your computer and the remote system.

(vi) Presentation Layer:
It is the 6th layer that does the trAnswer:lation of data to the next layer (Prepare the data to the Application Layer). Encryption and decryption protocols occur in this layer such as, Secure Socket Layer (SSL).

(vii) Application Layer:
It is the 7th layer, which acts as the user interface platform comprising of software within the system.
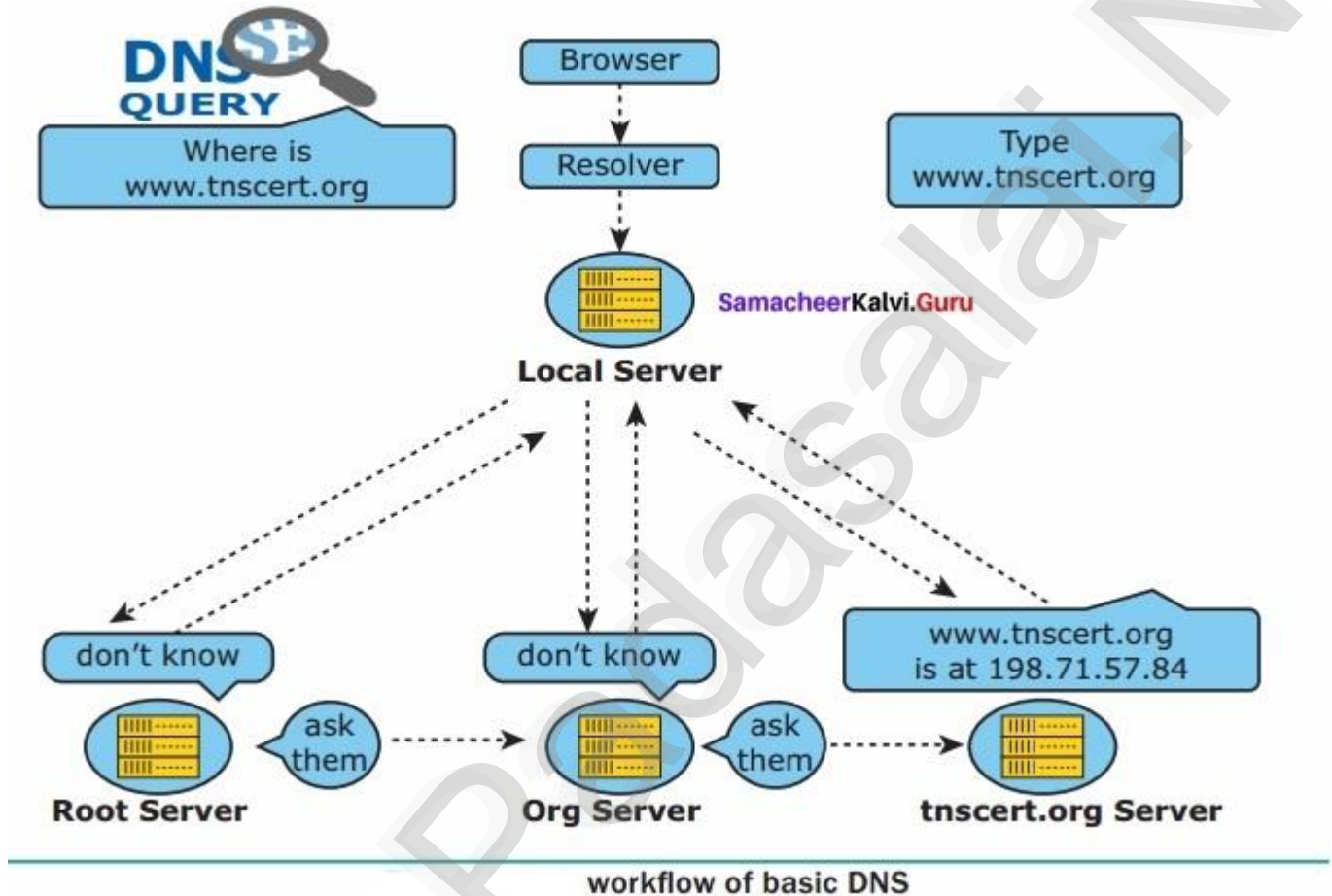
Chapter-12

1.Explain how the DNS is working?
Answer:
1. When the user enters the URL (consists of protocol, domain name, folder name, file name) in the browser, the system fist checks its DNS cache for the corresponding IP address.

2. If the IP address is found in the cache then the information is retrieved from cache.

3. If not, then the system needs to perform DNS query i.e., the system needs to query the resolver about the IP address from Internet Service Provider (ISP).

4. Each resolver has its own cache and if it is found in that then that information is retrieved.

5. 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.

6. Until the query is solved it is passed to next level domains. At last the mapping and the record are returned to the resolver who checks whether the returned value is a record or an error.

7. Then the resolver returns the record back to the computer browser which is then viewed by the user.

workflow of basic DNS

Chapter-14

1.Differentiate Proprietary and open source software?

Answer:

Proprietary Software:

1. It refers to the software that is solely owned by the individual or the organization that developed it.

2. Only the owner or publisher who holds the legal property rights of the source code can access it.

3. The project is managed by a closed group of individuals or team that developed it.

4. They are focused on a limited market of both skilled and unskilled end users.

5. There is a very limited scope of innovation with the restrictions and all.

6. Ex: Windows, MacOs, Google Earth

Open Source Software:

1. It refers to the software that is developed and tested through open collaboration.

2. Anyone with the academic knowledge can access, inspect, modify and redistribute the source code

3. The project is managed by an open source community of developers and programmers.

4. They are not aimed at unskilled users outside of the programming community.

5. It provides flexibility Ex. Android, Firefox, Ubuntu

6. Ex: Android, Firefox, Ubuntu.

Chapter-15

1.How would you differentiate a traditional commerce and E-Commerce?
Answer:
Traditional vs E-Commerce:
Traditional Commerce:

1. Traditional commerce is buying or selling of products and services physically.
2. Customer can easily identify, authenticate and talk to the merchant.
3. Physical stores are not feasible to be open all the time.
4. Products can be inspected physically before purchase.
5. Scope of business is limited to particular area.
6. Resource focus Supply side.
7. Business Relationship is Linear.
8. Marketing is one way marketing.
9. Payment is made by cash, cheque, cards etc.
10. Most goods are delivered instantly.
    E-Commerce:

1. E-Commerce carries out commercial transactions electronically on the Internet.
2. Neither customer nor merchant see the other.
3. It is always available on all time and all days of the year.
4. Products can't be inspected physically before purchase. .
5. Scope of business is global. Vendors can expand their business Worldwide.
6. Resource focus Demand side.
7. Business Relationship is End-to-end.
8. One-to-one marketing.
9. Payment system is mostly credit card and through fund transfer.
10. It takes time to transport goods.

Chapter-16

1.Explain the key players of a credit card payment system

Key players in operations of credit card:
1. **Bearer:**
The holder of the credit card account who is responsible for payment of invoices in full (transactor) or a portion of the balance (revolver) the rest accrues interest and carried forward.

2**. Merchant**:
Storekeeper or vendor who sell or providing service, receiving payment made by its customers through the credit card.

3. **Acquirer**:

Merchant's bank that is responsible for receiving payment on behalf of merchant send authorization requests to the issuing bank through the appropriate channels.

4. **Credit Card Network**:

It acts as the intermediate between the banks. The Company responsible for communicating the transaction between the acquirer and the credit card issuer. These entities operate the networks that process credit card payments worldwide and levy interchange fees. E.g. Visa, MasterCard, Rupay

5. **Issuer**:

Bearer's bank, that issue the credit card, set limit of purchases, decides the approval – of transactions, issue invoices for payment, charges the holders in case of default and offer card-linked products such as insurance, additional cards and rewards plan.

Chapter-17

1.Differentiate symmetric key and asymmetric key encryption.

No	Symmetric Key Cryptography	Asymmetric Key Cryptography
1	Single key is used for encryption and decryption.	Two different key is used, one for encryption and other for decryption.
2	It is also called secret key or private key cryptography.	It is also called public key cryptography or conventional cryptographic system.
3	It is faster than asymmetric key cryptography.	It is slower than symmetric key cryptography.
4	It uses less resource in compare to asymmetric key cryptography.	It uses more resource in compare to symmetric key cryptography.
5	For encryption of large message symmetric key cryptography is used.	In asymmetric key cryptography plain text and cipher text treated as integer number.
6	For example: DES, AES and BLOWFISH	For example, RSA and Diffie-Hellman Key exchange.
7	Mathematically it is represented as $C = E(K, P)$ and $P = D(K, C)$ i.e., C = Cipher text, E = Encryption, D = Decryption, P = Plain text, K =Secret Key	Mathematically it is represented as $C = E(Pu(R), P)$ and $P = D(Pr(R), C)$ i.e., C = Cipher text, E = Encryption, D = Decryption, P = Plain text, Pr(R) =Private Key of receiver, Pu(R) = Public key of receiver.

Chapter-18

1.What are the advantages of EDI?

Answer:

Advantages of EDI:

EDI was developed to solve the problems inherent in paper-based transaction processing and in other forms of electronic communication. Implementing EDI system offers a company greater control over its supply

chain and allow it to trade more effectively. It also increases productivity and promotes operational efficiency**. The following are the other advantages of EDI.**

1. Improving service to end users

2. Increasing productivity

3. Minimizing errors

4. Slashing response times

5. Automation of operations

6. Cutting costs

7. Integrating all business and trading partners

8. Providing information on process Status

9. Optimizing financial ratios

EDI Layers:
Electronic data interchange architecture specifies four different layers namely;

1. Semantic layer

2. Standards translation layer

3. Transport layer

4. Physical layer