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1. Multimedia and Desktop Publishing

1. Define. Multimedia

It allows the users to combine and change data from various sources like image, text, graphics, audio and video to a single platform.

2. List out Multimedia components

Multimedia has five major components like text, images, sound, video and animation.

3. List out Multimedia production team members

Production Manager, Content Specialist, Script Writer, Text Editor, Multimedia Architect, Computer Graphic Artist, Audio and Video Specialist, Computer Programmer, Web master

4. Write roles and responsibilities of Production team members

- 1. Conceptual Analysis and Planning:** It identifies a theme, budget and content on that selected theme
- 2. Project design:** Once the theme is finalized objectives, goals and activities are drawn for the multimedia project
- 3. Budgeting:** Hardware, Software, travel, communication and publishing is estimated for all the multimedia projects
- 4. Testing:** It is tested with different browsers like Internet Explorer, Chrome, Mozilla and Netscape Navigator.
- 5. Delivering the Multimedia Product:** Multimedia applications are best delivered on CD/DVD or in Website.

5. Explain in detail about Production team Roles and Responsibilities.

1.Production Manager: The Production manager should be an good in technology, communication skills and budget management skills.

2.Script Writer: The script writer visualizes the concepts in 3D environment.

3.Multimedia Architect: The multimedia architect integrates all the multimedia elements like graphics, text, audio, music, video, photos and animation.

4.Computer Programmer: The Computer Programmer writes the lines of code or scripts in the language.

5.Web Master: The web master is to create and maintain internet web page.

6. Explain about different file formats in multimedia files

1.Text Formats:

RTF: Rich Text Format is a primary file format introduced by Microsoft for cross-platform documents

2.Image Formats:

GIF: Graphics Interchange Format is a compressed image format. 13-bit color used by GIF format.

JPEG: Joint Photographic Experts Group is used method of lossy compression for digital images.

3.Audio Formats:

MP3: It is most popular format for downloading music.

4.Video File Formats:

AVI: This file format for Windows. Sound and picture elements are stored in alternate interleaved chunks in the file.

MPEG: It is standard for generating digital video and audio compression under the International Standards Organization (ISO) by the group of people

2. An Introduction to Adobe Pagemaker

1. What is desktop publishing?

DTP is the creation of page layouts for documents using software

2. Give some examples of DTP software.

Adobe PageMaker, Adobe InDesign, QuarkXPress

3. What is threading text?

The process of connecting text among text blocks is called threading text

Explain the tools in PageMaker tool box.

Tool	Toolbox	Use
Pointer Tool		Used to select, move and resize text object
Text Tool		Used to type, select and edit text

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Rotating tool		Used to select and rotate objects
Line tool		Used to draw straight lines
Rectangle tool		Used to draw squares and rectangles
Ellipse tool		Used to draw circles and ellipses
Polygon tool		Used to draw polygons

How to you insert page numbers in Master Pages?

1. Click on Master pages icon
2. Click on text tool. Now the cursor changes to I-beam.
3. Click on the left master page
4. Press Ctrl+Alt+P
5. The page number displays as 'LM' on the left master page

Write the steps to draw a star using polygon tool.

1. Click on the Polygon tool from the toolbox.
2. Click and drag on the screen, a polygon appears
3. Release the mouse button when the polygon is of the desired size
4. Choose element>polygon settings in the menu bar. Now polygon settings dialogue box appears
5. Type 5 in the number of sides text box.
6. Type 50% in star inset text box
7. Click Ok. Now the required star appears on the screen.

3.Introduction to database management system

1. What are the ACID properties?

Atomicity, Consistency, Isolation and Durability

4. Introduction to Hypertext Pre-processor

1. What is webserver?

A web server is a software that uses HTTP(Hyper Text Transfer Protocol) to serve the files that form web pages to users.

2. What is URL?

Uniform Resource Locator, the address of a specific web page on the internet.

3. What is web browser?

It is a software application for accessing information on the World Wide Web.

1. Explain Operators in PHP with example

Operator is a symbol which is used to perform mathematical and logical operations in the programming languages. They are

- 1)Arithmetic operators 2)Assignment operators 3)Comparison operators
4)Logical operators 5)String operators

1. **Arithmetic operator:** The arithmetic operators perform arithmetical operations, such as addition, subtraction, multiplication and division.

SYMBOL	OPERATOR NAME
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus

2. **Comparison operator:** The comparison operators compare two values

SYMBOL	OPERATOR NAME
==	Equal
<	Less than
<=	Less than or equal to
>	Greater than
>=	Greater than or equal to
<>	Not equal to
==	Equal to

3. **Logical Operator:** The Logical operators are used to combine conditional Statements

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SYMBOL	OPERATOR NAME
&&	AND
	OR
!	NOT

4. String operator

SYMBOL	OPERATOR NAME
.	Concatenation
.=	Concatenation assignment

5. Assignment operator: They are used to store a value to a variable

SYMBOL	OPERATOR NAME
=	x=y
+=	x+=y
-=	x-=y
=	x=y
%=	x%=y

2. Discuss in detail about PHP data types.

PHP has 13 data types. They are

- 1)String 2)Integer 3)Float 4)Boolean 5)Array 6)Object 7)Null 8)Resource

1. String:

It is a collection of characters within the double quotes

Ex. "Computer Application"

2. Integer:

Integer is a data type which contains non decimal numbers

Example \$x=45

3. Float:

Float is a data type which contains decimal numbers

4. Array:

Array is a data type which has multiple values

Example \$x=array("tamil", "English", "computer")

5. Null:

Null is a special data type which contains no value

Example \$x=null

5. PHP Function and Array

1. Define. Function in PHP

A function is a block of segment in a program that perform specific operations

A function is a type of subroutine in a program

2. Define Array. List out the types of array in PHP

An array is a concept that stores more than one value of same data type in single array variable.

- Indexed arrays
- Associative array
- Multi-dimensional array

3. Discuss Array concepts and their types

An array is a concept that stores more than one value of same data type in single array variable.

- **Indexed arrays:** Each element of line array is assigned on index values which commences from 0 and ends with n-1
\$array_variable=array("indian", "kavin", "nila")
- **Associative array:** you can store your data in a collection and assign it a unique key which you may use for referencing your data
Array(key=>value, key=>value,...)
- **Multi-dimensional array:**An array containing one or more arrays
\$student[0][0] "tamil" \$student[0][1]"English"\$student[0][2]"maths"

6. PHP Control Structures

1. Define. Conditional statements in PHP.

It performs different actions for different decisions in programming language.

2. List out Conditional statements in PHP.

- If statement
- If-else statement
- If-elseif-else statement
- Switch statement

3. Define if statement in PHP

It executes a statement if the condition is true.

Syntax:

if(condition)

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```
{
  Statements;
}
```

Example:

```
<?php
$m=70;
if($m>=35) {
echo "pass"; }
?>
```

4. Explain if else statement in PHP with an example.

if the condition is true it executes a statement1. If the condition is false it executes a statement2

Syntax:

```
if(condition) {
  Statement1;
}
else {
  Statement2;
}
```

Example:

```
<?php
$m=70;
if($m>=35) {
echo "pass"; }
else{
echo "fail"; }
?>
```

5. Explain the if elseif else statement with suitable example.

Multiple conditions can be checked and action is based on the result of the condition

Syntax:

```
if(condition1) {
  Statement1;
}
elseif(condition2) {
```

```
Statement2;
}
else {
  Statement3;

}
```

Example:

```
<?php
$m=70;
if($m>=60) {
echo "First class";
}
elseif($m>=35) {
echo "pass";
}
else {
echo "fail"; }
?>
```

6.Explain in detail about Switch statement with an example.

Switch statement work the same as if else if statement as they can check for multiple values at a time.

Syntax:

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

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default:

code to be executed;

}

Example:

```
<?php
$color="red";
switch($color){
case "red":
    echo "your favorite color is red";
    break;
case "blue":
    echo "your favorite color is blue";
    break;
case "green":
    echo "your favorite color is green";
    break;
default:
    echo"no color";}
?>
```

7. LOOPING STRUCTURE

1. Define. Loop structure in PHP

It is an iterative control structures that involves executive the same block of code a specified number of times.

2. List out looping structure in PHP

for loop
foreach loop
while loop
do while loop

3. Explain the concepts of for loop with example

It execute a block of code a specified number of times

Syntax:

```
for(init counter; test counter; increment counter)
{
    Code to be executed;
```

}

Init counter: Initialize the loop initial counter value

Test counter: If it evaluates to TRUE, the loop continues. If it evaluates to FALSE, the loop ends.

Increment counter: Increases the loop counter value.

example

```
<?php
for($i=0;$i<=10;$i++)
    echo "The number is:$i<br>";
}
?>
```

4. Explain in detail about foreach loop

It is used for looping through the values of an array.

Syntax:

```
foreach ($array as $value)
{
    Code to be executed;
}
```

Example:

```
<$php
$name=array("vijay", " arun", "kalai", "ramu");
Foreach ($name as $value)
{
    echo "$value<br>";
}
?>
```

5. Explain while loop with example.

The while loop executes a block of code as long as the condition specified in the while statement evaluates to TRUE.

Syntax:

```
While(condition is true)
{
    Code to be executed;
}
```

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Example:

```
</php
n=1;
while($n<=10){
echo " number:$n<br>";
?>
```

6. Explain the process Do while loop

The do-while loop is always similar to the while loop but executes a block of code at least once before evaluating the condition.

Syntax:

```
do
{
Code to be executed;
} while(condition is true)
```

Example:

```
</php
n=1;
do
{
echo " number:$n<br>";
} while($n<=10)
?>
```

8.Forms and Files

1. What is form validation in PHP?

Validation is a process of checking the input data submitted by the user from client machine.

2. Differentiate Get and Post method

Get method	Post method
The input data sent to the server with POST method via URL address known as query string.	The input data sent to the server with POST method is stored in the request body of the client's HTTP request
All input data are visible by user after they click the submit button	

3.Discuss in detail about HTML form controls

- Text inputs:** It contains textbox and text area controls
- Buttons :** It may contain Submit, Reset and Cancel button
- Check box :** It selects more than one value
- Radio box:** Value can be chosen at a time
- Form tag:** It is used to mention a method and control the entire form controls in the HTML document.

4.Explain the process File handling

- PHP Open a File – fopen()
- PHP Read a File – fread()
- PHP Close a File – fclose()
- PHP Write a File– fwrite()
- PHP Append a File
- PHP Upload a File

9.Connecting PHP and Mysql

10.Introduction to Computer Networks

1.Define Computer Network

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

2.Define. Internet

Network of networks is called Internet

3.What are the common uses of computer network?

- Communication
- Resource sharing
- Data or Software sharing
- Money saving

4.Difference between wired and wireless networks.

Wired network	Wireless network
It is connected with network cable	It is connected with tablets, indoor cameras, et., without cables (WiFi)

5.List out some features of mobile network

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- Less consumption of power is used by mobile devices comparing with a single transmitter
- Huge capacity than a large transmitter

6.List out some usefulness of social networks

- Group information sharing over long distances
- Broadcast announcements

7.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

11. Network Examples and Protocols

1. List out the benefits of WiFi

- It provides connection to Internet
- Flexibility of LAN
- Ensures connectivity
- Low costs, high benefits

2.What is the use of mobile network?

- Improved network capability
- Greater access to modern apps

3. Expand: HTTP, HTTPS, FTP

- **HTTP:** Hypertext Transfer Protocol
- **HTTPS:** Hypertext Transfer Protocol Secure
- **FTP:** File Transfer Protocol

4. How many types of RFID system available and what are they?

- Active RFID
- Passive RFID

5. Explain about the development, merits and demerits in mobile networks

- First Generation (1G) 1981-NMT launch
- Second Generation (2G) 1991-GSM launch
- Second to Third Generation Bridge (2.5) 2000-GPRS launch
- Third Generation (3G) 2003 – UK 3G launch
- Fourth Generation (4G) 2007
- Fifth Generation (5G) 2019+

Merits:

- Higher efficiency and productivity of staff
- Greater access to modern apps and services
- Improved networking capabilities

Demerits:

- More costs
- Workplace distractions
- Additional training needs
- Increased IT security needs

6. Discuss about OSI model with its layers

Physical Layer: This 1st layer, defines the electrical and physical specifications for devices

Data Link Layer: This 2nd layer, guarantees that the data transmitted are free of errors

Network Layer: This 3rd layer, responsible for routing of data packets using IP Addressing

Transport Layer: This 4th layer, guarantees sending of data successfully

Session Layer: This 5th layer, controls dialogues between computers

Presentation Layer: This 6th layer, does the translation of data to next layer

Application Layer: This 7th layer, acts as the user interface

7. Compare 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	A TCP/IP network with restricted access to members	Checking availability of inventory from an outside supplier

12. DNS (Domain Name System)

1.List any four domain names

tn.gov.in, google.co.in, yahoo.com, Wikipedia.org

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2.What is an URL? What are the types of URL?

URL – Uniform Resource Locator is the address of a document on the internet
 Absolute URL, Relative URL

3.List out four URL you know

www.tn.gov.in, www.tn.nic, <http://en.widipedia.org>, www.tnscert.org

4.What is a zone? What is a resolver?

A zone is a subset of the Domain namespace generally stored in file.
 The resolver is a program which is responsible for initiating the translation of domain name into an IP address.

5.Differentiate IPv4 and IPv6

IPv4	IPv6
32-bit unique address	128-bit unique address
Represented in binary	Represented in Hexadecimal
The number of addresses that can be formed in IPv4 is 2^{32}	The number of addresses that can be formed in IPv6 2^{128}

13. Network Cabling

Explain the types of network cables

- Coaxial cables:** This cable is used to connect the television sets to home antennas. The cable is used to transfer the information in 10 mbps. These cables have a copper wire inside and insulation is covered on the top of the copper wire to provide protection to the cable. Nowadays coaxial cables are also used for dish TV where the setup box
- Twisted Pair Cables:** It is type of cable with two or more insulated wires twisted together. The speed is 10 mbps to 100mbps. There are two types of twisted pair cables, Unshielded Twisted Pair (UTP) and Shielded Twisted Pair (STP).
- Fiber Optics Cables:** They are mainly used in Wide Area Network(WAN). These cables are placed in deep underground to avoid any damage to the cables. There are two types of fiber optic cables, one is single-mode another one is multimode.
- USB Cables:** The Universal Serial Bus are used to connect keyboard, mouse and other peripheral devices. Some special network devices used to connect the

internet through the USB called dongles. The dongle is a small peripheral device which has a compatible of mobile broadband with a slim slot in it.

- Ethernet Cables:** This cable is used for connecting the computers at home or office. This cable connects wired devices within the local area network(LAN) for sharing the resources and accessing internet. This cable works at a speed of 10 gbps and more.

14. Open Source Concepts

List out the Benefits of Open Source Software

- There are many open source software. So, we can select and use any software that suits our needs
- The complete options of the software can be used without any cost and restrictions
- We can share our ideas with the team, write the required code and share it with many.
- We can learn many ideas and make our program writing skills more efficient
- We can add the most required features in the software
- Many open source software are very user friendly.

15. E-Commerce

1.Define. E-commerce

E-commerce can be described as the process of buying or selling products, services or information via computer networks.

2.Differentiate a traditional commerce and E-commerce

traditional commerce	E-commerce
Traditional commerce is buying or selling of products and services physically	E-commerce carries out commercial transactions electronically on the internet
Customer can face to face and talk to the merchant	Neither customer nor merchant see the other
Physical stores are not feasible to be open at all times	It is always available on all time and all days of the year
Products can be inspected physically before purchase	Products can't be inspected physically before purchase
Most goods are delivered instantly	It takes time to transport goods

3.List all the E-commerce business models and explain any four briefly.

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1. Business to Business (B2B)
2. Business to Consumer (B2C)
3. Business to Government (B2G)
4. Consumer to Business (C2B)
5. Consumer to Consumer (C2C)
6. Consumer to Government (C2G)
7. Government to Business (G2B)
8. Government to Consumer (G2C)
9. Government to Government (G2G)

Business to Business (B2B)

Commercial transactions take place between different business organizations, through the internet. For example, a cycle company may buy tyres from another company for their cycles

Business to Government (B2G)

When a company get paid for its goods, services by the Government through Internet it is called as B2G model.

e.g. The Government buys laptops for students

Government to Business (G2B)

It refers to a business model where Government providing services to business organization. E.g. road project

Government to Consumer (G2C)

The Government provides platform for its citizens to avail its services and information through Internet. E.g. online certificates

4.Explain any five E-Commerce revenue models

Auction site is a kind of website, that auctions items on the internet and levies some commission from the sales. E.g. <https://www.ebay.com/>

Banner advertisement site displays advertisements of other companies in its websites and thereby earns revenue.

Digital publishing sites effectively host the e-books on the web. They make profiles in a number of ways such as advertising, selling e.g. <https://wordpress.org/>

Licensing sites allow other websites to make use of their software. Eg. Google search IGNOU website

Name-your-prices are just like normal retail sites. The buyer negotiates with the retailer for a particular product or service. E.g. <http://in.hotels.com/>

16. Electronic Payment Systems

1.What is the concept of e-wallet?

Electronic wallets allow users to make electronic transactions quickly and securely over the internet through smart phones or computers

2.Compare and contrast the credit card and debit card

	Credit Card	Debit Card
Definition	It enables the bearer to buy goods and payback the value later with interest	It is an electronic payment card where the transaction amount is deducted
Time of settlement of payment	Pay later	Pay now
Money source	Issuer lends money to customer	Money is transferred from the cardholder's bank account

17. E-Commerce Security Systems

1. Write a short note on typopiracy

Typopiracy is a variant of Cyber Squatting. Some fake websites try to take advantage of users' common typographical errors in typing a website address and direct users to a different website.

Eg. www.goggle.com, www.faceblook.com

2. Define. Non-repudiation

It is prevention against violation agreement after a deal.

1. Differentiate asymmetric and symmetric algorithms

Symmetric key Encryption	Asymmetric Key Encryption
Same key is used for both encryption and decryption	Different keys are used for encryption and decryption

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Speed of encryption or decryption is very fast	Speed of encryption or decryption is comparatively slow
Plain text and cipher text are of same size	The size of cipher text is always greater than plain text

2. Differentiate Digital signatures and Digital certificates

Digital Signatures	Digital Certificates
A digital signature is a mechanism that is used to verify that a particular document, message or transaction is authentic	A digital certificate is a computer file which officially approves the relation between the holder of the certificate and a particular public key
Digital signatures are used to verify the trustworthiness of the data being sent	Digital certificates are used to verify the trustworthiness of the sender
Digital signature is to ensure that a data remain secure from the point it was issue and it was not modified by a third party	Digital certificate binds a digital signature to an entity
It provides authentication, non-repudiation and integrity	It provides authentication and security
The document is encrypted at the sending end and decrypted at the receiving end using asymmetric keys	A digital certificate consist of certificate's owner name and public key, expiration date, a certificate authority's name, a certificate authority's digital signature

3.List the various layers of EDI

- Semantic layer
- Standard translation layer
- Transport layer
- Physical layer

4.Write about EDIFACT separators

Character	Uses
Apostrophe'	segment terminator
Plus sign+	Segment tag and data element seperator
Colon:	Component data element separator
Question mark?	Release character
Period .	Decimal point

5.Briefly explain various types of EDI

- **Direct EDI:**It is also called point-to-point EDI. It suits to larger business transactions
- **EDI via VAN:**EDI documents are transferred with the third party network service providers
- **EDI via FTP/VPN:**When this protocols are used for exchange of EDI based documents through the internet
- **Web EDI:**EDI using a web browser via the Internet
- **Mobile EDI:**When smart phones are used to transfer EDI document.

18. Electronic Data Interchange- EDI

1.Define. EDI

The Electronic Data Interchange is the exchange of business documents between one trade partner to another electronically

2.What are the 4 major components of EDI?

- Standard document format
- Translator and Mapper
- Communication software
- Communication network

6.What are the advantages of EDI?

- Improving service to end users
- Increasing productivity
- Minimizing errors
- Slashing response times
- Automation of operatins
- Cutting costs

*****ALL THE BEST *****