

12th
STD

PUBLIC EXAM - MARCH 2023

Reg. No.

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COMPUTER APPLICATIONS

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. The live telecasting of real-time program through Internet is known as _____.
(a) web hosting (b) data manipulation
(c) web casting (d) none of the above
2. In PageMaker window, the area outside the dark border is referred to as _____.
(a) black board (b) page
(c) dash board (d) paste board
3. MySQL belongs to which category of DBMS?
(a) Relational (b) Object Oriented
(c) Network (d) Hierarchical
4. Recent statistics of server side scripting language usage depict that 78.9% of Website are developed by _____ Scripting Language.
(a) PHP (b) Microsoft ASP
(c) CSS (d) JSP
5. Associative arrays are a _____ pair data structure.
(a) Double value (b) Single value
(c) String value (d) Key value
6. Loops that execute the same block of code, a specified number of times is called:
(a) While loops (b) Unbounded loops
(c) For loops (d) Bounded loops
7. In which input field only one option can be selected?
(a) Radio button (b) Text box
(c) Drop Down Menu (d) Check box
8. In which one of the following periods, the speed capacity supported towards giga bit on computer network?
(a) NEW FIBRE OPTICS (b) SABRE
(c) ARCNET (d) SAGE
9. Which one of the following is a technology to locate objects using radio signals?
(a) WiFi (b) URL
(c) RFID (d) HTTP
10. Maximum characters used in the label of a node.
(a) 63 (b) 255 (c) 32 (d) 128
11. The cables that are placed in deep underground to avoid any damage to the cables.
(a) Fiber optics (b) Coaxial cables
(c) USB cables (d) Twisted pair cables
12. The dotcom phenomenon deals with _____.
(a) Mobile phone companies
(b) Internet based companies
(c) Textile industries
(d) All the above
13. An example of network simulator.
(a) NS2 (b) Simulator
(c) C++ (d) TCL
14. The expansion of PGP:
(a) Pretty Good Program
(b) Pretty Good Privacy
(c) Private Good Person
(d) Pretty Good Person
15. A _____ is used for magnifying the particular portion of the area.
(a) Zoom tool (b) Text tool
(c) Hand tool (d) Line tool

PART - II

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

16. Define multimedia and mention its features.
17. What is text block?
18. State few advantages of Relational databases.
19. How will you declare variables in PHP?
20. What is Form Validation in PHP?
21. What is trace file?
22. List out the benefits of WiFi.
23. What is an URL?
24. What are the ways in which networks are connected at home?

PART - III

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

25. What is the use of Master Page?
26. Write about Asymmetric key Encryption.
27. Write short notes on file handling function.
28. Write the disadvantages of Internet.
29. Write short notes on HTTP, HTTPS, FTP.
30. Explain B2C module in E-Commerce.
31. What are the differences between Absolute URL and Relative URL?
32. What is relationship in databases? List its types.
33. Write the output of the following program:

```
<?php
$a = 5; $b = 10;
$c = ($a+$b)* $a;
echo $c;
?>
```

PART - IV

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

34. (a) Explain in detail about the roles of Multimedia production team and their Responsibilities.
(OR)
(b) What are the advantages of EDI?
35. (a) Explain the tools in PageMaker toolbox.
(OR)
(b) Write about the development and growth of Electronic Commerce.

36. (a) How can you convert text in a text block to a frame?
(OR)

- (b) Discuss in detail about Switch statement with an example.

37. (a) Explain working of loops in array.
(OR)

- (b) Explain about Internet, Intranet and Extranet.

38. (a) Write the output of the following program.

```
<?php
$Pass_Mark = 35;
$Student_Mark = 70;
if ($Student_Mark >= $Pass_Mark)
{
echo "The Student is eligible for Promotion";
}
else
{
echo "The Student is not eligible for promotion";
}?>
```

(OR)

- (b) What is pay later method card? Explain the key players of a pay later method payment system and bring out its merits.

Answers**PART - I**

1. (c) web casting
2. (d) paste board
3. (a) Relational
4. (a) PHP
5. (d) Key value
6. (d) Bounded loops
7. (a) Radio button
8. (a) NEW FIBRE OPTICS
9. (c) RFID
10. (a) 63
11. (a) Fiber optics
12. (b) Internet based companies
13. (a) NS2
14. (b) Pretty Good Privacy
15. (a) Zoom tool

PART - II

16. The word multimedia consists of two words “multi” and “media” which means that multiple forms of media are combined to gather and provide services like storage, communication, presentation and Input/ output interactions of text, video, image, graphics and audio.

Features of Multimedia :

- (i) The information they handle is represented digitally.
 - (ii) Multimedia systems are integrated computer controlled and usually interactive.
17. A text block contains the text you type, paste, or import. The borders of a text block cannot be seen until it select with the pointer tool.
18. **Advantages :**
- (i) High Availability
 - (ii) High Performance
 - (iii) Robust Transactions and Support
 - (iv) Ease of Management
 - (v) Less Cost
19. The variable in PHP begins with a dollar (\$) symbol and the assignment activity implemented using “=” operator, finally the statement ends with semi colon “;” The semicolon indicates the end of statement. Eg. : \$a=5; \$b=10
20. Validation is a process of checking the input data submitted by the user from client machine.
21. A significant output of simulation is the trace files. Trace files can document every incident that happened in the simulation and are used for examination.
22. (i) It provides mobility.
(ii) It provides connection to Internet.
(iii) Flexibility of LAN.
(iv) Ensures connectivity.
(v) Low cost, high benefits.

23. URL (Uniform Resource Locator) is the address of a document on the Internet. URL is made up four parts: protocols, hostname, folder name and file name. Each part has its own specific functions.

24. Networks at home were connected by two ways they are

- (i) Wired network
- (ii) Wireless network

PART - III

25. (i) Any text or object that you place on the master page will appear on all the document pages to which the master is applied.
(ii) It shortens the amount of time because you don't have to create the same objects repeatedly on subsequent pages.
(iii) Master pages commonly contain repeating logos, page numbers, headers and footers.
(iv) They also contain non-printing layout guides, such as column guides, ruler guides and margin guides.
26. (i) Asymmetric encryption also called as RSA (Rivest-Shamir-Adleman) algorithm.
(ii) It uses public-key authentication and digital signatures.
(iii) Unlike a symmetric encryption, the communicating parties need not know other's private-key in asymmetric encryption.
(iv) Each user generates their own key pair, which consists of a private key and a public key.
(v) A public-key encryption method is a method of converting a plaintext with a public key into a ciphertext from which the plaintext can be retrieved with a private key.
27. PHP has many function. Those functions are
- (i) fopen () – It is used to open a file.
 - (ii) fread() – After file is opened using fopen() the contents of data are read using fread()
 - (iii) fwrite() – New file can be created or text can be appended to an existing file using fwrite() function
 - (iv) fclose()_file is closed using fclose() function. Its argument is file which needs to be closed.
 - (v) file_put_contents()–Function is used to append a file.

28. Disadvantages of Internet :

- (i) Simply wasting the precious time on Internet by surfing, searching unwanted things.
- (ii) Lot of unnecessary wrong informations are sometimes posted by some people on their web pages, blog etc.
- (iii) Different types of thefts related to money and other valuables can take place through. Internet as hackers and viruses are always active around.

- 29. (i) HTTP :** A protocol used between a web client and a web server protects non-secure data transmissions. The core protocol of the World Wide Web.
- (ii) HTTPS :** A protocol used between a web client and a web server permits secure data transmissions.
- (iii) FTP :** Used between computers for sending and receiving data. Enables a client to send and receive complete files from a server.

30. Business to Consumer (B2C) :

- (i) In B2C E-Commerce, commercial transactions take place between business firms and their consumers.
- (ii) It is the direct trade between companies and end-consumers via the Internet.
- (iii) B2C companies sell goods, information or services to customers through online in a more personalized dynamic environment and is considered as real competitor for a traditional storekeeper.
- (iv) An example of B2C transaction is a book company selling books to customers.

31.

No	Absolute URL	Relative URL
1.	Absolute URL is the complete address of a document on the Internet.	Relative URL is the partial address of a document on the Internet.
2.	Absolute URL contains all the information that are required to find the files on the Internet.	Relative URL contains only file name or file name with folder name.

3.	If any of the four parts is missing, then the browser will not be able to link to the specific file. So, all the four parts are very important in absolute URL.	We can use this type of URL when the file is on the same server related to current document.
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32. 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:** Consider two entities A and B. 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:** Consider two entities A and B. 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.

33. Output :

75

PART - IV**34. (a) 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) **Advantages:** 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.

- (i) Improving service to end users
- (ii) Increasing productivity
- (iii) Minimizing errors
- (iv) Slashing response times
- (v) Automation of operations
- (vi) Cutting costs
- (vii) Integrating all business and trading partners
- (viii) Providing information on process status
- (ix) Optimizing financial ratios

35. (a)

Tool Box Usage			
Tool	Toolbox	Cursor	Use
Pointer Tool			Used to select, move, and resize text objects and graphics.
Text tool			Used to type, select, and edit text.
Rotating tool			Used to select and rotate objects.
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		+	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.

(OR)

(b) Economists describe four distinct waves (or phases) that occurred in the Industrial Revolution. In each wave, different business strategies were successful. Electronic commerce and the information revolution brought about by the Internet likely go through such series of waves.

The First Wave of Electronic Commerce: 1995 -2003

- (i) The Dotcom companies of first wave are mostly American companies. Thereby their websites were only in English.
- (ii) The Dotcom bubble had attracted huge investments to first wave companies. As the Internet was mere read-only web (web 1.0) and network technology was in its beginning stage, the bandwidth and network security was very low.
- (iii) Only EDI and unstructured E-mail remained as a mode of information exchange between businesses.

The Second Wave of Electronic Commerce: 2004 – 2009

- (i) The second wave is the rebirth of E-Commerce after the dotcom burst.

(ii) The second wave is considered as the global wave, with sellers doing business in many countries and in many languages.

(iii) The second wave companies used their own internal funds and gradually expanded their E-Commerce opportunities.

(iv) As a result E-Commerce growth was slow and steady. The rapid development of network technologies and interactive web (web 2.0, a period of social media) offered the consumers more choices of buying.

The Third Wave of Electronic Commerce: 2010 – Present

- (i) The third wave is brought on by the mobile technologies.
- (ii) It connects users for real-time and on-demand transactions via mobile technologies.
- (iii) The term Web 3.0, summarize the various characteristics of the future Internet which include Artificial Intelligence, Semantic Web, Generic Database etc.

36. (a) **Converting text in a text block to a frame:** After created text in a text block, to convert it to a frame. It can be done by using these steps.

- (i) Draw the **frame** of your choice using one of the PageMaker's Frame tool.
- (ii) Select the text block you want to insert in the frame.
- (iii) Click the frame while pressing the Shift key. Now both elements will be selected.
- (iv) Choose **Element** → **Frame** → **Attach Content** on the Menu bar.
- (v) Now the text appears in the frame.

(OR)

(b) **Switch Statement:**

- (i) This is a multiple branching statement where, based on a condition, the control is transferred to one of the many possible points.
- (ii) The switch statement is used to specify multiple conditions. It runs a different code block for different conditions.

Syntax

switch (expression)

```

{
case value1:
//code to be executed if expression = value1;
break;
case value2:
//code to be executed if expression = value2;
break;
...
default:
//code to be executed if expression is not
equal to any of the values;
}

```

Example :

```

<?php
$x = 10;
switch ($x)
{
case 5:
echo "x is equal to 5";
break;

```

case 10:

echo "x is equal to 10";

break;

case 15:

echo "x is equal to 15";

break;

default:

echo "x is not equal to 5, 10, or 15";

}

?>

Output :

x is equal to 10

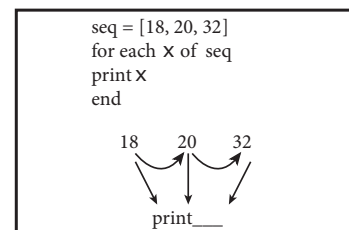
37. (a) **Foreach Loop :** foreach loop is exclusively available in PHP. It works only with arrays. The loop iteration deepens on each KEY Value pair in the Array. For each, loop iteration the value of the current array element is assigned to \$value variable and the array pointer is shifted by one, until it reaches the end of the array element.

Syntax :

```

for each ($array as $value) {
code to be executed;
}

```



Foreach loop Structure and Flow

Example:

```

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

```

(OR)

(b) Comparison between Internet, Intranet and Extranet

S.No	Internet	Intranet	Extranet
Meaning	Several Networks, small and big all over the world, are connected together to form a Global network called the Internet.	Intranet is a website used by organizations to provide a place where employees can access company related information	Extranet is a private network using Internet technology to share part of business information with supplier's partners and customers.
Applications	Download programs and files	Sharing of company policies / rules and regulations	Online education / training
Network Accessibility	Public Access	Private Access	Private Access

38. (a) **Output :**

The student is eligible for the promotion.

(OR)

(b) **Pay later Method Card (Credit Card) :**

- (i) 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.
- (ii) Every credit card account has a purchase limit set by the issuing bank or the firm.

Key players in operations of credit card :

- (i) **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.
- (ii) **Merchant :** Storekeeper or vendor who sell or providing service, receiving payment made by its customers through the credit card.
- (iii) **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.
- (iv) **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
- (v) **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.

Advantages of credit card :

- (i) Most credit cards are accepted worldwide.
- (ii) It is not necessary to pay physical money at the time of purchase. The customer gets an extra period to pay the purchase.
- (iii) Depending on the card, there is no need to pay annuity.
- (iv) Allows purchases over the Internet in installments.
- (v) Some issuers allows "round up" the purchase price and pay the difference in cash to make the transactions easy.

