

HSE II YEAR PUBLIC EXAM MARCH 14 2025

TENTATIVE ANSWER KEY

COMPUTER APPLICATIONS

PART I

1. B) MULTIMEDIA
2. A) ZOOM TOOL
3. B) CTRL + A
4. D) ===
5. D) 3
6. B) CONDITIONAL
7. D) NONE OF THE ABOVE
8. C) FOR EACH LOOP
9. B) ENTRY CHECK LOOP
10. B) NET WORK
11. B) FILE TRANSFER PROTOCOL
12. B) TIM BERNERS LEE
13. A) DIGITAL PUBLISHING SITES
14. D) EXTRA NET
15. B) TDCC

PART II

16. What is a pasteboard in PageMaker ?

The area outside of the dark border is referred to as the pasteboard.

17. What are the ACID Properties

The acronym stands for Atomicity, Consistency, Isolation and Durability

18. Write a short note on hackers

Hackers were skilled computer experts, some who with their technical knowledge access our accounts.

19. Write the syntax of file close function in PHP

`fclose($file_Object);`

20. Define Intranet.

The Intranet is a private network within an enterprise to share company data and computing resources between the employees.

It may consist of many interlinked local area networks.

21. What is a zone?

Zone is the contiguous part up to which the server has access. The domain assigned for the server does not divide into further sub domains then zone is same as domain.

22. What is a trace file?

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.

23. Write about Phishing

Phishing is acquiring critical data like login credentials through telephone, sms, e-mail or any social media by the crackers disguising as authentic.

24. Write the output

Hello, world

PART III

25. List out image file formats

TIFF (Tagged Image File Format)

BMP (Bitmap)

DIB (Device Independent Bitmap)

GIF (Graphics Interchange Format)

JPEG (Joint Photographic Experts Group)

TGA (Tagra)

PNG (Portable Network Graphics)

26. What is the use of master page

Any text or object that you place on the master page will appear on the entire document pages to which the master is applied.

Master Pages commonly contain repeating logos, page numbers, headers, and footers.

27. What is relationship in database? List the types

Relationship in database is between two tables when the foreign key of one table references primary key of other table

OR

In Entity Relationship Model, relationship exists between two entities.

Three types of relationships are,

One-to-One relationship

One-to-Many relationship

Many-to-Many relationship

28. PHP supports three different sets of tags:

PHP Default tags

Short open tags

HTML script embed tags

PHP Default tags:

PHP code is enclosed in `<?php` and `?>` tags

Short open tags:

It is an alternative to the default syntax and they allow you to use `<? and ?>` instead of `<?php and ?>`

HTML script embed tags:

You can also embed PHP code within HTML script tags `<script language="php">?php </script>`

29. What will be the output of the following in PHP code

x is equal to 5

30. What are the layers available in TCP/IP Reference Model?

Network Access Layer - Concerned with building packets.

Internet Layer - Describes how packets are to be delivered.

Transport Layer - Ensure the proper transmission of data.

Application Layer - Application network processes.

31. Write a short note on RJ45 connector.

The “RJ” stands for the Registered Jack and the “45” simply refers to the interface standard.

The RJ45 connector is a small plastic cube.

It has eight pins.

It is connected to each end of the Ethernet cable.

It is also known as 8P8C connector.

These plugs (connector) are inserted into Ethernet port of the network card

32. Explain briefly the anatomy of a credit card

Publisher: Emblem of the issuing bank.

Credit card number: The modern credit card number has 16-digit unique identification number.

Name of the cardholder: It is visibly embossed on the front side of the card.

EMV chip: It is integrated chip in addition to magnetic stripe to store cardholder's information.

RFID symbol: It indicates that it is a contactless smartcard.

Expiration month and year: The card is valid until the last day of the month printed on it.

33. Write the Syntax of mysqli_query function with example:

mysqli_query(“Connection Object”, “SQL Query”)

Example:

\$con=mysqli_connect(“localhost”, “my_user”, “my_password”, “Student_DB “);

sql=“SELECT name,age FROM student”;

mysqli_query(\$con,\$sql);

PART IV

34. Explain in detail about different file formats in multimedia files

Text File Formats:

RTF(Rich Text Format)

Rich Text Format is the primary file format introduced in 1987 by Microsoft

Plain text

Plain text files can be opened, read, and edited with most text editors.

Image File Formats:

TIFF (Tagged Image File Format)

This format is common in desktop publishing world (high quality output)

Supported by almost all software packages.

Allows image compression

This format is comfortable for moving large files between computers.

DIB (Device Independent Bitmap)

Allows the files to be displayed on a variety of devices.

GIF (Graphics Interchange Format)

GIF is a compressed image format. This file format is best suitable for graphics that uses only limited colors 8-bit Color look up table is used by the GIF format to identify its color values.

JPEG (Joint Photographic Experts Group)

JPEG was designed to attain maximum image compression. It uses lossy compression technique. It works good with photographs, naturalistic artwork

Digital Audio File Formats:

AIFF (Audio Interchange File Format)

A standard audio file format used by Apple which is like a WAV file for the Mac.

WAV (Waveform Audio File Format)

It is the most popular audio file format in windows for storing uncompressed sound files.

MP3 (MPEG Layer-3 Format)

MPEG Layer-3 format is the most popular format for storing and downloading music.

WMA (Windows Media Audio)

It is a popular windows media audio format owned by Microsoft. WMA is a file extension used with windows media player.

RA (Real Audio Format)

Real Audio format is designed for streaming audio over the Internet.

AVI is the video file format for Windows.

Here sound and picture elements are stored in alternate interleaved chunks in the file.

MPEG (Moving Picture Experts Group)

MPEG is the standards for digital video and audio compression.

OR

b) Explain in detail on various types of Attributes in DBMS

An attribute is the information about that entity and it will describe, quantify, qualify, classify, and specify an entity.

Types of attributes:

Key Attribute - Unique characteristic of an entity.

Simple Attributes - Cannot be separated

Composite Attributes - Can be subdivided into simple attributes

Single Valued Attribute - Contains only one value

Relationship:

In Entity Relationship Model, relationship exists between two entities.

Three types of relationships are,

One-to-One relationship

One-to-Many relationship

Many-to-Many relationship

35. Write the steps to place the text in a frame.

Click on one of a Frame tool from the Toolbox.

Draw a frame with one of PageMaker's Frame tools (Rectangle frame tool or Ellipse Frame Tool or Polygon frame Tool). Make sure the object remains selected.

Click on *File > Place*. The place dialog box will appear.

Locate the document that contains the text you want to place, select it.

Click on *Open*.

Click in a frame to place the text in it. The text will be placed in the frame.

OR

b) What are the datatypes in PHP? Explain.

PHP data types:

Integer:

Integer is a data type which contains whole numbers.

It can be positive, negative, or zero.

Example:

\$age = 30;

Float:

Float is a data type which contains decimal numbers.

Example:

\$price = 19.99;

String:

String is a data type which contains a sequence of characters enclosed in single quotes (') or double quotes (" ")

Example:

\$name = "Barath";

Boolean:

Boolean is a data type which contains the value True or False. Example:


```
$is_admin = true;
```

Array:

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

Example:

```
$prices = array(10, 20, 30);
```

Object:

An object is a data type that represents an instance of a class.

```
$user = new User();
```

Resources

Example:

```
$fp = fopen ("file.txt", "r");
```

NULL data type

Null is a special data type which contains "NULL value" which means "no value".

The keyword NULL is not case sensitive

Example:

```
$x = null;
```

36. Explain the types of network cables

Coaxial Cables:

Coaxial Cables is used to connect the television sets to home antennas. This cable is used to transfer the information in 10 mbps. The cable is divided into thinnet and thicknet cables. These cables have a copper wire inside and insulation is covered on the top of the copper wire to provide protection to the cable. These cables are very difficult to install and maintain, because they are too big to carry and replace.

Twisted Pair Cables:

Twisted Pair Cable is type of cable with two or more insulated wires twisted together. It has 8 wires which are twisted to ignore electromagnetic interference. It started with the speed of 10 mbps. There are two types of twisted pair cables,

Unshielded Twisted Pair (UTP)

Shielded Twisted pair (STP).

The UTP is used as modern cables for Internet and they are lower in cost and installation and maintenance is easy compared to the coaxial cables. STP is similar to UTP, but it is covered by an additional jackets to protect the wires from External interference.

Fiber Optics:

Fiber Optic Cable is strands of glass and pulse of light is used to send the information. The optic cable uses light to transmit the information from one place to another. These cables are placed in deep underground to avoid any damage to the cables. They are mainly used in Wide Area Network (WAN). There are two types of fiber optic cables are available

Single-mode (100BaseBx)

Multimode (100BaseSX)

Single-mode cables are used for long distance transmission and at a high cost. Multimode cables are used for short distance transmission at a very low cost. The optic cables are easy to maintain and install.

USB Cables:

The Universal Serial Bus are used to connect keyboard, mouse and other peripheral devices. Micro USB is a miniaturized version of the USB used for connecting mobile devices.

Serial and Parallel cables:

The Serial and Parallel interface cables are used to connect the Internet to the system. The system will have both serial port and parallel port. The serial port will send 1 bit at one time whereas the parallel port will send 8 bit at one time.

OR

b)List all the E-Commerce business models and explain any four briefly.

Business to Business (B2B)

Business to Consumer (B2C)

Business to Government (B2G)

Consumer to Business (C2B)

Consumer to Consumer (C2C)

Consumer to Government (C2G)

Government to Business (G2B)

Government to Consumer (G2C)

Government to Government (G2G)

Business to Business (B2B)

In B2B E-Commerce, 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. When compared to other models, the value per transaction in B2B transaction is high, because of bulk purchases.

Business to Consumer (B2C)

In B2C E-Commerce, commercial transactions take place between business firms and their consumers. It is the direct trade between companies and end-consumers via the Internet. An example of B2C transaction is a book company selling books to customers. This mode is intended to benefit the consumer and can say B2C . E-Commerce works as 'retail store' over Internet.

Consumer to Government (C2G)

Citizens as Consumers and Government engage in C2G E-Commerce. Here an individual consumer interacts with the Government. C2G models usually include income tax or house tax payments, fees for issuance of certificates or other documents. People paying for renewal of license online may also fall under this category.

Government to Business (G2B)

G2B is closely related to B2G. G2B in E-Commerce refers to a business model where Government providing services or information to business organization. It may be a formal offer such as a takeover bid for a road project.

37. Write a note on a. Internet banking b. Mobile banking

i) Internet banking

Internet banking is a collective term for E-banking, online banking, virtual banking, direct banks, web banking and remote banking. Internet banking allows customers of a financial institution to conduct various financial transactions on a secure website operated by the banking institutions. This is a very fast and convenient way of performing any banking transactions. It enables customers of a bank to conduct a wide range of financial transactions through its website. In fact, it is like a branch exclusively operating of an individual customer. The online banking system will typically connect to the core banking system operated by customers themselves (Self-service banking).

ii) Mobile banking

Mobile banking is another form of net banking. The term mobile banking (also called m-banking) refers to the services provided by the bank to the customer to conduct banking transactions with the aid of mobile phones. These transactions include balance checking, account transfers, payments, purchases, etc. Transactions can be done at anytime and anywhere.

The WAP protocol installed on a mobile phone helps the user have a permanent control over the account and remote management of his own finances.

OR

b)What are the advantages of EDI

1. The following are the other advantages of EDI.
2. Improving service to end users
3. Increasing productivity
4. Minimizing errors
5. Slashing response times
6. Automation of operations
7. Cutting costs
8. Integrating all business and trading partners
9. Providing information on process status
10. Optimizing financial ratios

38. Write the syntax of Multi-Dimensional array with suitable example

In PHP, a multidimensional array is an array that contains one or more arrays as its elements. The elements of a multidimensional array can themselves be arrays, creating an array of arrays, also known as a nested array.
Example 1 : A multidimensional array that contains one array as its element.

This array contains one element, which is an array containing three integers. You can access the elements of this array using two sets of square brackets, with the first set specifying the row and the second set specifying the column.

Example : A multidimensional array that contains three arrays as its elements.

```
$arr = array(array(1, 2, 3),array(4, 5, 6),array(7, 8, 9));  
echo $arr[1][2]; // Output will be 6.
```

We can access the elements of the array using two sets of square brackets, with the first set specifying the row and the second set specifying the column.

b) Write a php code to print 10 to 1 numbers in descending order using for loop

```
<?php
for ($i = 10; $i >= 1; $i--)
{
    echo $i . "<br>";
}
?>
```

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All birds find shelter during a rain. But eagle avoids rain by flying above the clouds. Problems are common, but **attitude makes the difference.**

— Abdul Kalam

