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DIGIWARE 6



Classification of Computers and Computer Languages



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (c) 3. (a) 4. (a) 5. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. F 4. F 5. F

C. Fill in the blanks.

1. Super 2. PDAs, smart phones
3. machine language 4. mnemonics, 0, 1 5. Assembler

D. Answer the following questions.

1.	Microcomputers	Minicomputers
	The computers that we generally see at different places like schools, colleges, offices and homes are called microcomputers. They are small computers that are used by one person at a time.	Minicomputers are more powerful than microcomputers. They are known as multiprocessing systems which can support up to 200 users simultaneously. It has greater storage capacity than a microcomputer. It may be used as a network and Internet Server.

2. (i) Super computers are the biggest and most powerful computers.
(ii) Weather forecasting, fluid dynamic calculations, nuclear energy research, and petroleum exploration require a supercomputer.
3. Examples of high-level languages (HLLs) are ALGOL, COBOL, FORTRAN, ADA, C++, and Java, etc.

4. (a)	Compiler	Interpreter
	A compiler is a translator program used to convert a high level language program into machine language before executing it. It translates the whole program at once, i.e., it generates the object code for the program along with a list of errors, if any.	This translator program is used to convert a high level language program into machine language. It translates line by line, i.e., it converts one line at a time, executes the instruction and then repeats the procedure for the remaining instructions.
(b)	Machine Language	Assembly Language
	Machine language is also known as binary language, as it is written using only two digits - 0 and 1. It is the only language understood by a computer.	Programs in assembly language have to be converted into machine language. The syntax of assembly language is closer to English. Programs use symbols called mnemonics in places of 0 and 1.

5. These languages have following features:

- Artificial Intelligence (AI).
- Fuzzy logic.
- Neural networks.
- Computers can think for themselves and draw their own conclusions.
- Speech recognition is an important feature of 5GLs.
- Little or no coding and computer-aided design with graphics make these languages easy to work with.

Examples are PROLOG, Mercury and OPS5.

Fun Activity



1. (a) microcomputers (b) internal processor © supercomputers
(d) mainframe computers (e) microprocessor
2. Do yourself
3. Do yourself

HOTS



First Generation Languages

Polishing a Presentation



Let's Do This

A. Multiple Choice Questions.

1. (b) 2. (c) 3. (b) 4. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. F 4. F

C. Fill in the blanks.

1. Insert 2. This Device
3. Screen Recording 4. Change colors

D. Answer the following questions.

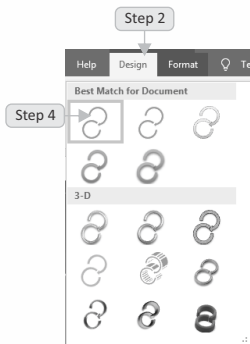
1. See topic 'Inserting an Audio File' on book page no- 14.
2. See topic 'Inserting a List' on book page no- 21.
3. To change the SmartArt style, follow the steps given below.

Step 1 : Click on the inserted SmartArt. The **Design** and **Format** tabs appear.

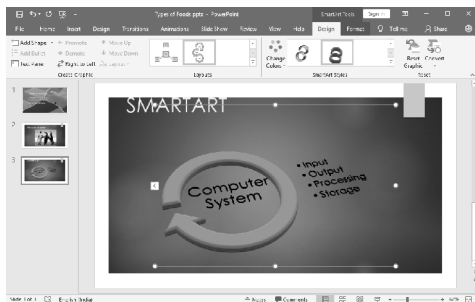
Step 2 : Click on the **Design** tab. Its ribbon appears.

Step 3 : Click on the **More** drop-down arrow of the **SmartArt Styles** group. A drop-down menu appears.

Step 4 : Click on the desired style and it will be applied on to the SmartArt. The style of the SmartArt gets changed.



A list of SmartArt styles



The style of the SmartArt changed

4. Action buttons are built-in button shapes that function much like hyperlink. We can link them to a file, slide, web address or e-mail address and so on. When someone click or move the pointer over an action button, the specified action will occur.

Fun Activity



Find and circle the following words extracted from this chapter in the word search given below.



HOTS



Slide Sorter view

3

Editing and Formatting in Excel



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (a) 3. (a) 4. (c) 5. (a)

B. State true 'T' or false 'F'.

1. F 2. F 3. F 4. F 5. T

C. Fill in the blanks.

1. Shift cell right 2. Shift + F11 3. orientation
4. wrapping 5. cell styles

D. Answer the following questions.

1. See topic 'Inserting column(s), Row(s) in A Worksheet' on book page no-36.
2. A group of adjacent cells is called a **cell range**.

To Select a Range of Cells

Step 1 : Select the first cell in the range which you want to select.

Step 2 : Click-and-hold the left mouse button and drag left or right, up or down to the last cell you want to select.

Step 3 : Release the mouse button.

The cells get selected and are shown as Shaded. Alternately for selecting a cell range you may click on the first cell in the range and hold down the Shift key on the keyboard and select the last cell of the range to select the entire range.



Highlighted cell range

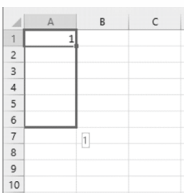
3. The **AutoFill** Feature of Excel allows you to quickly fill a range of cells with the same type of data or with the data that follows a pattern (series) without typing it.

To fill cells with a pattern, follows the steps given below.

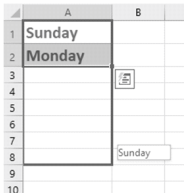
Step 1 : Type first two values in two adjacent cells to form a series.

Step 2 : Select both the cells and take the mouse pointer on the lower-right position. Cursor will be changed in fill handle shape.

Step 3 : Drag the fill handle to enclose the area you want to fill. The series will appear in cells automatically according to first two numbers.



To fill same type of data



Filling the names of days of the week




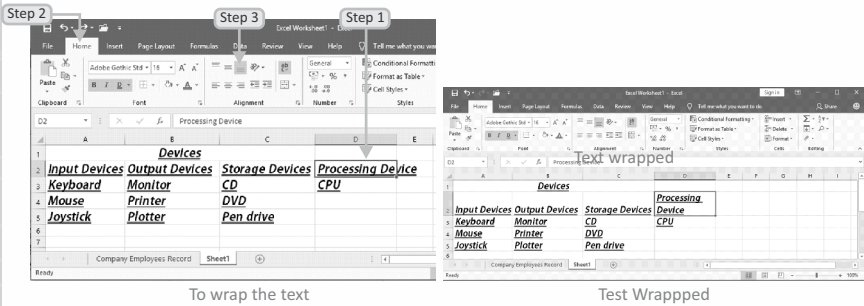
4. Wrapping is applied on to the text to display it in multiple lines in a cell. Wrapping text in a cell does not affect other cells.

To wrap the text, follow the steps given below.

Step 1 : Select a cell or a range of cells in which you want to wrap the text.

Step 2 : Click on the **Home** tab.

Step 3 : Click on the **Wrap Text**  option. The text in the selected cells will be wrapped in a single cell.



5. See topic 'Applying Cell Styles' on book page no- 42.

Fun Activity





- (a) F2 (b) Shift + Spacebar (c) Ctrl + Spacebar (d) Shift + F11
- Find and circle the following words extracted from this chapter in the word search given below.



HOTS



- Three ways to rename a worksheet:
 - Double-click the **sheet** tab, and type the new name.
 - Right-click the **sheet** tab, click **Rename**, and type the new name.
 - Use the keyboard shortcut Alt+H>O>R, and type the new name.
- Wrap text  and center Align .



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (b) 3. (b) 4. (a) 5. (a)

B. State true 'T' or false 'F'.

1. F 2. T 3. F 4. T 5. F

C. Fill in the blanks.

1. cell references 2. Functions 3. equal to (=)
4. dollar (\$) 5. MIN()

D. Answer the following questions.

1. See topic 'Functions in MS-Excel' on book page no- 53.

Absolute Cell Reference	Mixed Cell Reference
<p>Absolute cell reference contains dollar signs attached to each letter or number in a reference, e.g., \$B\$4. Suppose we mention a dollar sign before the column and row identifiers.</p> <p>It makes absolute or locks both the column and the row, i.e., where cell reference remains constant even if it is copied or dragged to another cell.</p>	<p>In Excel, mixed cell references contain dollar signs attached to either the letter or the number in a reference. E.g., \$B2 or B\$4. It is a combination of relative and absolute references.</p>

3. Excel **formulae** are the expressions that are used for doing calculations on the worksheet data. You can easily create and use formulae in Excel 2016.

Rules to Enter a Formula

The different rules to enter a formula are as follows:

- Every Excel formula begins with an equal to sign (=).
 - The '=' sign can be followed by a number, cell address, cell range, mathematical operator or function and so on.
 - There must be no space between the equal to (=) sign and the operands.
4. See topic 'Using the Formulae' on book page no- 48.

5. With AutoFill, You can quickly and easily fill in a range of cells with a series of values without entering them one at a time.

Fun Activity



Solve the crossword using the clues.



HOTS



Write the functions needed to do the following calculations.

- Find the sum of a range of cells
- Function used to convert text string into upper case
- Find the maximum from given numbers

SUM (range)

UPPER (text)

MAX (range)

5

Algorithm and Flowchart



Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (c) 3. (c) 4. (a) 5. (c)

B. State true 'T' or false 'F'.

1. F 2. F 3. F 4. T 5. F

C. Match the following:

- | | | |
|---------------------|---|---------------|
| 1. Input/Output box | → | Oval |
| 2. Flow Lines | → | Diamond |
| 3. Decision box | → | Rectangle |
| 4. Terminal Symbol | → | Parallelogram |
| 5. Processing Box | → | Arrow |




D. Fill in the blanks using the help box.

- | | | |
|---------------|------------------|---------------|
| 1. Algorithm | 2. flow line | 3. flow chart |
| 4. processing | 5. parallelogram | |

E. Answer the following questions.

1. Algorithm is the step-by-step instructions written in simple language to perform a particular task. These set of instructions when written in any programming language, become a computer program. So, algorithm is an important part of program development.
2. There are some guidelines for writing an algorithm. These guidelines or rules make algorithms easy to understand by different people. While writing an algorithm, follow the given rules:
 - Number the statements such as Step 1, Step 2, etc.
 - Always begin with the word Start.
 - Write the statements clearly.

3.

Symbol	Name	Description
	Start/ Stop Box	The Oval shaped Terminal Box is used to indicate the start and the end of a flowchart.
	Input/ Output Box	The parallelogram shaped input/output box, as the name suggests, is used to show the input and output related steps in a flowchart.
	Processing Box	The rectangular shaped processing box is used to show the processing step (calculations, data manipulation, and so on) in a flowchart.

4. The rectangular shaped processing box is used to show the processing step (calculations, data manipulation, and so on) in a flow chart.

5. Rules of Flow chart

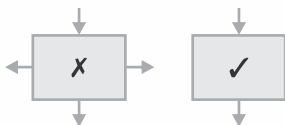
- (i) It flows from top to bottom and left to right.
- (ii) It is arrow which indicates the flow and pattern of information.
- (iii) If your flowchart is too long to adjust in one sheet then connector can be used.
- (iv) Crossing flow lines do not indicate that there is any logical connection between those lines.
- (v) Ensure that the flowchart has a logical start and finish.

Fun Activity

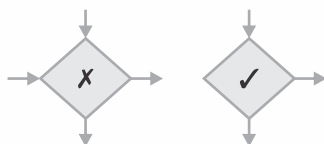


1. Given below are some flowchart symbols. Tick the correct one and put a cross against the incorrect symbol.

A.

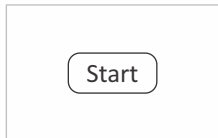


B.

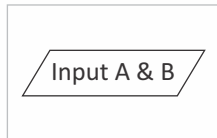


2. Draw the flowchart symbols for the following.

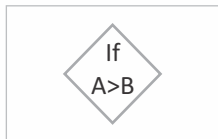
A. Start



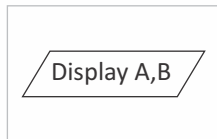
B. Input A, B



C. If $A > B$



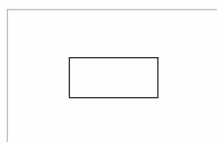
D. Display A, B



E. Stop



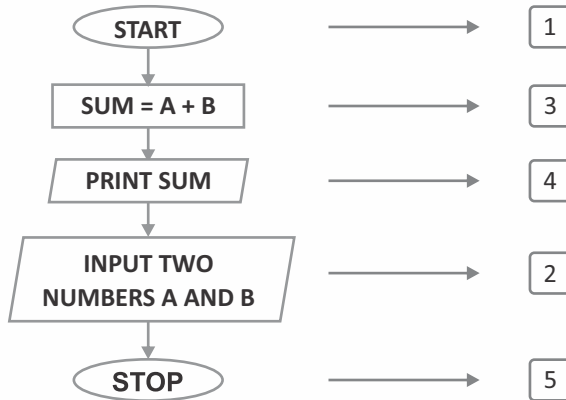
F. Processing



HOTS



First Generation Languages



6

Introduction to Python



Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (a) 3. (c) 4. (b) 5. (c)

B. State true 'T' or false 'F'.

1. F 2. T 3. T 4. T 5. F

C. Fill in the blanks.

1. Guido Van Rossum 2. String 3. Assignment
4. Input () 5. Variable

D. Answer the following questions.

1.
 - Python is a high-level language. It is a free and open-source language.
 - It is an interpreted language, as Python programs are executed by an interpreter.
 - Python uses indentation for blocks and nested blocks.
2. Python has two basic programming modes:
 1. Interactive mode 2. Script mode

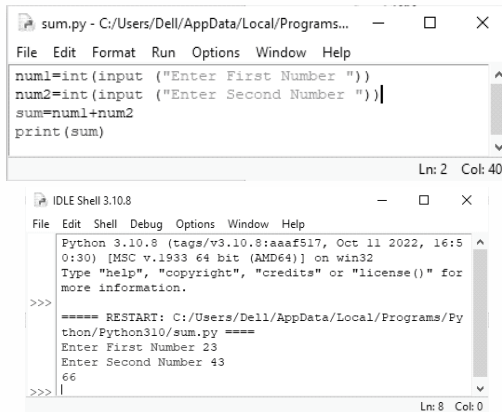
Working in Interactive mode

The Interactive mode is the default mode. It is a command line shell which gives immediate result for each command. In Interactive mode, we type one command at a time. Python executes the given command and gives the output.

Working In Script Mode

In the script mode. We can write a Python program in a file, save it and then use the interpreter to execute it. Python Scripts are saved as files where file name has extension “.py”.

3. See topic ‘Variables in Python’ on book page no- 75.
4. To work with the values provided by the user, Python provides the `int()` function. When you use `int()` function, the values are converted to integers and are then added as shown below.



The image shows two windows from the Python IDLE environment. The top window is a text editor titled 'sum.py' containing the following code:

```
num1=int(input ("Enter First Number "))
num2=int(input ("Enter Second Number "))
sum=num1+num2
print (sum)
```

The bottom window is the 'IDLE Shell 3.10.8'. It shows the execution of the script. The prompt is `>>>`. The first input is 23, and the second input is 43. The output is 66.

```
>>> Python 3.10.8 (tags/v3.10.8:aaaf517, Oct 11 2022, 16:5
0:30) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for
more information.
>>> ===== RESTART: C:/Users/Dell/AppData/Local/Programs/Py
thon/Python310/sum.py =====
Enter First Number 23
Enter Second Number 43
66
>>>
```

In this program, when you run the source code, the sum of 23 and 43 shows 66 as the given value converts into integer using `int()` function so '+' operator performs the addition between entered values.

5. In Python strings, the **backslash** `\` is an escape character. You can use print statement with multiple escape sequences. For example, `\t` means a tab space and `\n` means newline character.

Fun Activity



Which of the following identifier names are invalid and why?

- | | | |
|--------------|---------|---|
| 1. Serial_no | Valid | The first character of the identifier can only begin with a letter (a-z, A-Z) or an underscore (_). |
| 2. 1st_Room | Invalid | Identifier name cannot start with a number. |
| 3. Hundred\$ | Invalid | Identifier name must not contain special character. |

- | | | |
|----------------|---------|---|
| 4. Total Marks | Invalid | Identifier name must not contain any white-space. |
| 5. Total_Marks | Valid | The first character of the identifier can only begin with a letter (a-z, A-Z) or an underscore (_). |

HOTS



```
name 1 = input("Enter name 1 : ")
name 2 = input("Enter name 2 : ")
name 3 = input("Enter name 3 : ")
name 4 = input("Enter name 4 : ")
name 5 = input("Enter name 5 : ")
```



Intelligence and AI Approaches



Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (c) 3. (c) 4. (a) 5. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. T 5. T

C. Fill in the blanks.

1. Artificial Intelligence 2. Interpersonal 3. Siri, Cortana
4. Intelligence 5. Deep Blue

D. Answer the following questions.

1. Intelligence is the ability of a system to calculate, reason, perceive relationships and analogies, learn from experience, store and retrieve information from memory, solve problems, comprehend complex ideas, use natural language fluently, classify, generalize, and adapt new situations. It refers to the ability to think, to learn from previous experience, to solve complex problems and to adapt new things and environment..
2. Super AI is a level of Intelligence of Systems at which machines could surpass human intelligence, and can perform any task better than human with cognitive properties. It is an outcome of general AI. Some key characteristics of strong AI include capability include the ability to

think, to reason, solve the puzzle, make judgments, plan, learn, and communicate by its own.

Super AI is still a hypothetical concept of Artificial Intelligence. Development of such systems in real is still world changing task.

3.

General AI	Narrow AI
<ul style="list-style-type: none">▪ It also know as strong AI.▪ It refers to AI systems that possess human-level intelligence or even surpass human intelligence across a wide range of tasks.▪ It would be capable of understanding, reasoning, Learning and applying knowledge to solve complex problems.	<ul style="list-style-type: none">▪ It also known as weak AI.▪ It is specialized AI, operators within a limited context and is a simulation of human intelligence applied to a narrowly defined problem.▪ Narrow AI is often focused on performing a single task extremely well.

4. Advantages Of Artificial Intelligence

Following are some main advantages of Artificial Intelligence.

- High accuracy with less errors:** AI machines or systems are prone to less errors and high accuracy as it takes decisions as per pre-experience or information.
- High speed:** AI systems can be of very high speed and fast decision making, because of that AI systems can beat a chess champion in the chess game.

Disadvantages Of Artificial Intelligence

Every technology has some disadvantages, and the same goes for Artificial Intelligence. Being so advantageous technology still, it has some disadvantages which we need to keep in our mind while creating an AI system. Following are the disadvantages of AI.

- High cost:** The hardware and software requirement of AI is very costly as it requires lots of maintenance to meet out the current world requirements.
 - Can't think out of the box:** Even we are making smarter machines with AI, but still they cannot work out of the box, as the robot will only do that work for which they are trained or programmed.
5. Verbal-linguistic approach means the ability to speak, recognize, and use mechanisms of phonology (speech sounds), syntax (grammar), and semantics (meaning).

Fun Activity



Search and find following words extracted from this chapter in the wordsearch given below. See across and downward.

T	E	S	L	A	B	O	T	R	A	L	E	X	A	L
A	C	Z	Q	M	R	L	A	G	R	N	E	Q	Z	K
D	I	Q	P	N	C	K	D	K	T	B	S	W	X	H
C	H	A	T	B	O	T	S	S	I	R	I	E	C	G
A	A	E	K	E	R	F	A	I	F	J	V	R	V	F
R	T	G	I	N	T	E	L	L	I	G	E	N	C	E
R	O	B	O	T	A	A	R	E	C	I	C	A	M	R
L	C	O	U	I	N	R	L	T	I	O	V	S	N	I
C	H	T	Y	X	A	G	C	W	A	T	B	D	B	C
H	S	O	P	H	I	A	H	Q	L	Y	N	F	V	A

HOTS



Naturalistic Intelligence

8

Internet Services & Safety



Let's Do This

A. Multiple Choice Questions.

1. (c)
2. (c)
3. (b)
4. (c)
5. (c)

B. State true 'T' or false 'F'.

1. F
2. T
3. F
4. T
5. T

C. Fill in the blanks.

1. 1969
2. e-mail
3. search engine
4. Plagiarism
5. play store

D. Answer the following questions.

1. See topic 'Popular Services on the Internet' on book page no- 93.
2. (a) WWW is the acronym for World Wide Web which is used sometimes interchangeably with Internet. But there is an essential difference between these two terms. Internet on one hand is a huge collection

of complicated networks, which are connected to each other physically using cables, satellites, microwaves, radio waves, etc. The WWW on the other hand consist of a collection of documents containing interlinked information, which acts as a resource for the Internet.

- (b) Search engines are specially programmed websites that are designed to help people find information on the web. Search engine is a special program that searches the web for search terms given by us and displays a list of websites. The most popular search engines are Google, Bing, Ask, Altavista and MSN search.
 - (c) Flickr (www.flickr.com) is the most popular photo sharing site. It allows you to edit your photos, organize them into albums, create cards and books, and control the viewers of your photos. A free Flickr account enables you to upload 1TB of photos. You can upgrade to a Pro account, which is a paid account that offers unlimited uploads and storage.
- 3. See topic 'How do Search Engines work?' on book page no-99,100.
 - 4. Identity Theft cases have been growing rapidly in the last few years. In Identity Theft, someone steals your identity. This is done to either harm you directly or steal your personal information. If someone knows passwords to any of your accounts, they could easily log in and steal your personal data.
 - 5. Cyber Safety Rules
 - Create a strong password for all platforms. Try to create unique passwords. Most importantly, the passwords are not related at all. In this way, hackers will not succeed in their password guessing methodology.
 - Always read the terms and conditions of any site. In this way, you will know whether your information will be collected or not.
 - Never type your financial information on any site, especially, if the site lacks padlock on the page.

Fun Activity



- ISP : Internet Service Provider
- VSNL : Videsh Sanchar Nigam Limited
- WWW : World Wide Web
- URL : Uniform Resource Locator

HOTS



Do yourself.



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (a) 3. (c) 4. (a) 5. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. F 4. F 5. T

C. Fill in the blanks.

1. Decimal 2. 8 3. 1 4. 15 5. 0 with Carry 1

D. Answer the following questions.

1. The number system or the numeral system is the system of naming or representing numbers. A number system is required as a system of writing to express numbers.
2. See topic 'Decimal to Binary Conversion' on book page no- 7.
3. **Octal Number System (Base 8 Number System)**

In the Octal number system, the base is **8** and it uses numbers from **0 to 7** to represent numbers. Octal numbers are commonly used in computer applications.

Hexadecimal Number System (Base 16 Number System)

In the hexadecimal system, numbers are written or represented with base **16**. In the hexadecimal system, the numbers are first represented just like in the decimal system, i.e., from **0 to 9**. Then, the numbers are represented using the alphabet from **A to F**. The below given table shows the representation of numbers in the **hexadecimal number system**.

Hexadecimal	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Decimal	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

4. See topic 'Computer Arithmetic' on book page no- 8.
5. (i)

$$\begin{array}{r}
 \overset{\text{Carry}}{\overset{1}{1}} \overset{1}{1} \overset{1}{1} \overset{1}{1} \overset{1}{1} \\
 1 \quad 1 \quad 1 \quad 1 \quad 1 \\
 + \quad 1 \quad 0 \quad 1 \quad 1 \\
 \hline
 1 \quad 0 \quad 1 \quad 0 \quad 1 \quad 0
 \end{array}$$

Therefore, $(11111)_2 + (1011)_2 = (101010)_2$

(ii)

Borrowed 1

Again Borrowed 1

10

Balance

Balance

Number is now

1	0	1	0
- 0	0	1	1
<hr/>	<hr/>	<hr/>	<hr/>
1	0	0	1

$$\begin{array}{r} 10 \\ - 1 \\ \hline 9 \end{array}$$

Therefore, $(1100)_2 - (11)_2 = (1001)_2$

(iii)

$$\begin{array}{ccccccc}
 & & 1 & 1 & 1 & 1 & \\
 & & X & 1 & 0 & 1 & \\
 \hline
 & & 1 & 1 & 1 & 1 & \\
 & 0 & 0 & 0 & 0 & x & \\
 & 1 & 1 & 1 & 1 & x & x \\
 \hline
 1 & 1 & 0 & 1 & 0 & 1 & 1
 \end{array}$$

Therefore, $(1111)_2 \times (101)_2 = (1101011)_2$

(iv)

Diagram illustrating the long division process in base 2:

Divisor: 1001

Dividend: 10000111

Quotient: 01111

Remainder: 0000

The process shows the divisor (1001) being subtracted from the dividend (10000111) to find the quotient (01111) and the remainder (0000).

Therefore, Quotient = $(01111)_2$ and Remainder = $(0)_2$

Fun Activity



- Find and circle the following words extracted from this chapter in the wordsearch given below. See across and downward.

A	L	U	E	B	J	B	S	A	Q	Z
V	B	I	N	A	R	Y	I	S	W	X
E	Y	K	W	S	E	I	G	D	E	C
T	T	U	E	E	R	O	N	F	R	V
H	E	X	A	D	E	C	I	M	A	L
P	O	Q	U	Z	O	T	F	J	A	B
O	I	E	T	C	G	A	I	K	S	N
D	E	C	I	M	A	L	C	L	F	M
K	P	V	B	O	M	X	A	P	G	J
A	R	I	T	H	M	E	T	I	C	F
L	R	M	D	I	G	I	T	U	B	G

- The following numbers are holding wrong base values. Identify the correction and rewrite each.

(a) $(78)_{10}$

$(78)_8$

(b) $(443)_2$

$(443)_{10}$

(c) $(00011101)_{16}$

$(00011101)_2$

(d) $(AB9)_8$

$(AB9)_{16}$

HOTS



See topic 'Binary Subtraction' on book page no-9.

2

Advanced Features of Excel



Let's Do This

A. Multiple Choice Questions.

1. (a)

2. (a)

3. (c)

4. (a)

5. (c)

B. State true 'T' or false 'F'.

1. T 2. F 3. F 4. T 5. F

C. Fill in the blanks.

1. Chart 2. Legends 3. Xaxis,Yaxis 4. Sorting 5. Filter

D. Answer the following questions.

1. There are many advantages of charts. Some of the advantages are:
 - Charts present data and information in an attractive manner.
 - Charts present data and information in a compact manner.
 - Charts are easier to understand and compare.
 - Charts have a long-lasting effect on the mind than a simple data statement.
2.
 - Chart area and Plot area

Chart Area	Plot Area
It includes all objects and elements in a chart.	This is a rectangular area where data is actually plotted. It is bounded by two axes (x-axis and y-axis).

- Column chart and Bar chart

Column Chart	Bar Chart
A column chart is used to depict comparisons among different items of data or changes in data trend over a period of time. In this type of chart, values are represented on the vertical axis whereas categories are represented on the horizontal axis. Each bar in the chart represents value of one item of data.	A bar chart displays the comparisons among individual items as sets of horizontal bars. A bar chart is similar to a column chart except that in this type of chart, the values are represented on the horizontal axis whereas categories are represented on the vertical axis.

- Sorting and Filtering

Sorting	Filing
Sorting of data mean to organise the data in ascending or descending order. Excel allows you to sort both numeric and textual data. You can sort the data according to a particular column as well as a range of data.	A filter can be used to narrow down data in a worksheet to view only selective records. The filter hides away the rest of the data from the view.

▪ Legends and Data series

Legends	Data Series
This identifies each data series in a unique colour or pattern.	It refers to the data entries from which a chart is derived.

3. Chart elements give more descriptions to your charts, thus making your data more meaningful and visually appealing.
4. In case, more than one columns are to be sorted in such a way that the first column is in ascending order and if some data is same for more than one rows then the second column of such rows gets sorted in descending order. You can do this in Excel using Custom Sort.
5. See topic 'Conditional Formatting in MS Excel' on book page no- 25.
6. To remove all filters from a worksheet, simply click on the **Filter** button.

Fun Activity



See Picture on book page no 15.

HOTS



Use custom sorting.



Introduction to Adobe Animate CC



Let's Do This

A. Multiple Choice Questions.

1. (b)
2. (c)
3. (c)
4. (a)
5. (a)

B. State true 'T' or false 'F'.

1. T
2. F
3. T
4. T
5. F

C. Fill in the blanks.

1. Lines
2. Stroke
3. Label text, Block text
4. Break Apart
5. Group

D. Answer the following questions.

1. Adobe Animate CC is a software package that allows the users to create animations. Using this software, one can combine images, audio, video

and other effect interactive create animations. Originally, it was designed to create animations to be displayed on web pages. Animate is now commonly used to create games, cartoons, websites, photo galleries, and much more.

2. See topic 'Components of Adobe Animate CC Window' on book page no- 31.
3. **Properties Panel** : It is also called **Property Inspector**. It is generally appears at the bottom of the window. It provides options for changing the commonly used properties of the currently selected tool in the Tools panel or the selected graphic on the stage.

Timeline : The Timeline is used to set the sequencing and timings of various graphics and other elements of a movie to create animation. The major components of the Timeline are **Layers**, **Frames** and the **Playhead**.

4. **Stroke color** is the colour of the line you draw or the outlines of the object.

Fill Color is the colour which you fill inside the shape.

5. The Line tool helps us to draw straight lines.

The Pencil tool can be used to draw freeform lines in the same way we would use a real pencil to draw any figure on a canvas or paper.

Fun Activity



See picture on book page no- 32.

HOTS



The most common file formats used with the specific file extensions:

- **.fla file extension** is used for Editable Adobe Flash project (animation, movie, flash application).
- **.flv file extension** is used for Flash video.
- **.swf file extension** is used for shockwave Flash, Animated vector format for the Internet.

4

Introduction to HTML



Let's Do This

A. Multiple Choice Questions.

1. (a)
2. (b)
3. (b)
4. (b)
5. (b)
6. (b)

B. State true 'T' or false 'F'.

1. F 2. T 3. T 4. F 5. T 6. T

C. Fill in the blanks.

1. <BODY> 2. Line break 3. <HR> 4. <SUP> 5. <P>

D. What are the following HTML tags used for?

- (a) **<TITLE>** : The text inside it, only appears at the top of the browser window i.e., at the title bar.
- (b) **<HEAD>** : It defines the HTML document header i.e., it displays information about the document. It does not affect the appearance of document in the browser.
- (c) **<P>** : It is used to start a new paragraph.
- (d) **<HR>** : It is used to insert a horizontal line in your web page.
- (e) **
** : The
 tag inserts a single line break.
- (f) **<SUB>** : This tag is used to display the text as subscript.

E. Answer the following questions.

1. **HTML** stands for **HyperText Markup Language**. It is a language used to create web pages. It uses some standard tags to tell your web browser how to display the web page you have requested. For this reason, it is called **markup language**.

Features of HTML

- HTML is easy to learn and execute as it is based on tags.
 - It is not a case sensitive language.
 - HTML is an interpreter-based language as its commands are executed instruction by instruction.
2. ** Tag** : This tag is used to make the text bold. It starts with and ends with .
- <I> Tag** : This tag is used to tilt the text. It starts with <I> and ends with </I>.
- <U> Tag** : This tag is used to insert a line below the text. It starts with <U> and ends with </U>.

3. (a)

Container Tag	Empty Tag
It contains text or other tags. These tags are used in pairs and have a starting tag and ending tag. An End tag is always preceded by a forward slash (/).	It does not contain text or any other tag. It has only a start tag. It does not have an End tag.

(b) The <HR> Tag creates a line across the page and has no closing tag.
The
 tag creates a line break within a block of text, so the text will start on a new line.

(c) See topic '<SUB> and <SUP> Tags' on book page no- 53.

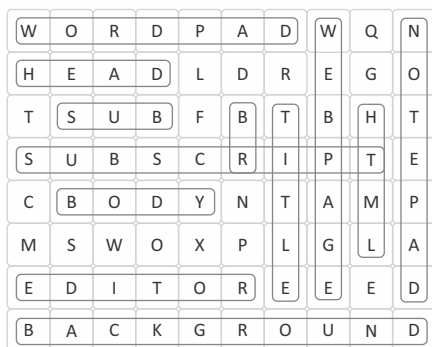
4. See topic 'HTML Tags' on book page no- 48.

5. See topic 'Font Tags' on book page no- 52.

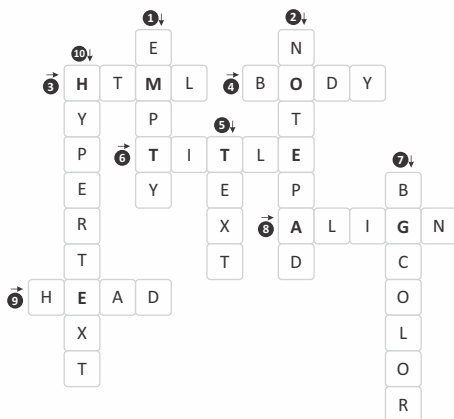
Fun Activity



1. Find and circle the following words extracted from this chapter in the wordsearch given below. See across and downward.



2. Solve the Crossword using given clues :



HOTS



She should prefer one having several short web pages with selected information in each. It will help you to make a well arranged and attractive web page as well as help you to understand HTML coding better.



Moving Ahead with HTML 5



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (b) 3. (c) 4. (b) 5. (c)

B. State true 'T' or false 'F'.

1. F 2. F 3. F 4. F 5. T 6. F

C. Fill in the blanks.

1. ordered 2. <MARQUEE> 3. nested
4. <TR> 5. <CAPTION>

D. Answer the following questions.

1. tag is used to create an ordered list like 1, 2, 3, a, b, c, I, II, III, etc. Here, OL stands for Ordered List.

 tag is used to create unordered list like bulleted list in the form of disc, square or circle. Here, UL tag stands for Unordered List.

2. See topic 'Nested List' on book page no- 61.
3. <table>

```
<thead>
  <th> Column 1 </th>
  <th> Column 2 </th>
  <th> Column 3 </th>
  <th> Column 4 </th>
</thead>
<tbody>
  <tr>
    <td> Row 1 Column 1 </td>
    <td> Row 1 Column 2 </td>
    <td> Row 1 Column 3 </td>
    <td> Row 1 Column 4 </td>
  </tr>
</tbody>
```

```

        <td> Row 2 Column 1 </td>
        <td> Row 2 Column 2 </td>
        <td> Row 2 Column 3 </td>
        <td> Row 2 Column 4 </td>
    </tr>
    <tr>
        <td> Row 3 Column 1 </td>
        <td> Row 3 Column 2 </td>
        <td> Row 3 Column 3 </td>
        <td> Row 3 Column 4 </td>
    </tr>
</tbody>
</table>

```

4. See topic '**<MARQUEE> TAG**' on book page no- 61.
5. Tables help us to display data on the web page in an organised and systematic manner. They assist in the positioning and the arrangement of content on the web page. HTML **<TABLE>** tag is used to display data in tabular form (row * column). There can be many columns in a row.

Fun Activity



1. Underline all the opening tags with green color and all the attributes with blue color.

```

<HTML>
    <HEAD>
        <TITLE> Sample page </TITLE>
    <'/HEAD>
    <BODY bgcolor="red">
        <P> Hello everyone!</P>
        <BR>
        <P align="right"> Bye!</P>
    </BODY>
</HTML>

```

[Here — line represents green color and ===== line represents blue color.]

2. Find nine HTML5 attributes used while creating lists and tables from this grid.

D	I	Y	B	E	S	B	S	R	E	J
R	S	T	A	R	T	O	Y	F	D	B
F	D	Y	C	Q	A	R	O	E	H	C
G	O	P	K	W	R	D	K	D	I	D
H	N	E	G	R	E	E	J	C	O	R
J	B	O	R	D	E	R	H	O	R	F
I	O	O	O	B	G	C	O	L	O	R
R	T	N	U	F	T	O	G	S	W	G
U	W	E	N	S	U	L	D	P	S	I
D	W	I	D	T	H	O	Z	A	P	M
O	A	F	U	Z	E	R	C	N	A	J
P	N	G	I	R	I	F	B	E	N	G
Q	T	T	H	H	G	A	H	R	F	X

HOTS



HTML contains no programming logic. It doesn't have common conditional statements such as If/Else. It can't evaluate expressions or do any math. It doesn't handle events or carry out tasks.

6

Computer Virus



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (b) 3. (a) 4. (a) 5. (c)

B. State true 'T' or false 'F'.

1. F 2. T 3. T 4. T 5. F 6. T

C. Fill in the blanks.

1. Virus 2. Boot 3. Creeper 4. Antivirus 5. Macro

D. Name the following viruses.

1. Trojan Horse
2. Boot Virus
3. Worms
4. Program file virus
5. Spyware

E. Answer the following questions.

1. See topic 'Computer Virus' on book page no- 69.
See topic 'Types of Virus' on book page no- 73.
2. Our computer gets affected by virus by the following ways:
 - It can be loaded onto your computer through an infected floppy, pen drive, CD-ROM, or other storage medium.
 - It can be transferred through a downloaded file, or an e-mail attachment. At this point, an infected file is in our computer's hard drive. When we run the program, it infects the computer.
3. (a) **Boot Virus** : The virus that infects a part of a hard disk or a floppy drive is referred to as boot sector virus. Boot sector is a crucial part of a disk where the operating system and boot programs will be stored. This virus becomes active at the time of booting of system. These viruses are almost extinct as floppy disks are outdated now.
Examples : Polyboot .B and Antix, Disk killer, Stoned virus, etc.
- (b) Worm is a special type of virus program that copies and multiplies itself by using computer networks and security due to heavy consumption of system memory or network bandwidth.
- (c) **Spyware** : Spyware is a type of malware that covertly gathers user's information through the user's Internet connection without his or her knowledge usually for advertising purpose. Spyware applications are typically bundled as a hidden component of freeware or shareware programs that can be downloaded from the Internet.
- (d) **Trojan Horse** : Trojan horse is a simple program that pretends to be a useful application, whereas it always does something destructive—mostly it damages a computer like erasing a disk. It is not self-replicating. It can spread only when it is copied to another system.

4. Symptoms of A Computer Virus

A virus can cause problems in a computer in many ways such as:

- Unexplained data loss by formatting the hard disk.
- Reducing the speed of a computer by decreasing the memory.
- Causing strange movements or patterns on the screen.
- Increasing the size of files by attaching themselves to the files.
- Sudden decrease in free space on hard disk.
- Frequent hanging of the system.

- Displaying unusual messages.
 - Showing abnormal write protect error.
 - Displaying a change in data against the file name in the directory, when a virus modifies the file.
 - Deleting or damaging files.
 - Frequent computer crashes.
 - Strange sounds or music plays from the speakers unexpectedly.
5. See topic 'What does a Computer Virus do?' on book page no- 69, 70.
 6. Antivirus software, also known as anti-malware, is a computer program used to prevent, detect and remove malware. It is an application software designed to detect and remove the virus from the computer system.

Example : Norton, Bit defender, McAfee, Quick Heal, Kaspersky etc.

Fun Activity



Find out the names of five virus and five Antivirus in the word grid given below:

A	M	E	W	O	R	M	S	W	M	M	S
V	Q	U	B	T	R	O	J	A	N	C	P
A	A	O	R	C	B	O	O	T	L	A	Y
S	G	I	A	W	K	Q	A	M	A	F	W
T	Q	U	I	C	K	H	E	A	L	E	A
R	M	X	N	M	L	L	R	V	R	E	R
D	H	A	P	E	O	U	H	G	C	O	E
C	N	O	R	T	O	N	N	B	H	P	B

HOTS



Program File Virus

7

Operators and Conditional Statements



Let's Do This

A. Multiple Choice Questions.

1. (b)
2. (a)
3. (c)
4. (a)
5. (c)

B. State true 'T' or false 'F'.

1. F 2. F 3. T 4. T 5. F

C. Fill in the blanks.

1. Operand 2. Exponent 3. * 4. False 5. colon

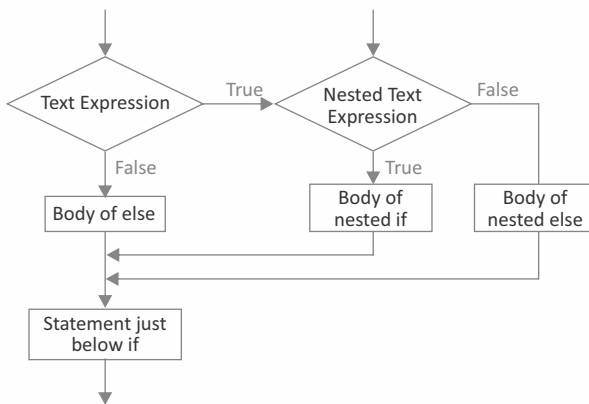
D. Answer the following questions.

1. See topic 'Operators' on book page no- 78.
2. / operator is used to divide the numbers and give an output in the decimal form while // operator is used to divide the numbers and give an output in the integer form by removing decimal part.
3. String replication operator * is used to replicate a string multiple times.
4. Conditional statements in Python languages decide the direction (Control Flow) of the flow of program execution. The statements which are executed depending upon a condition are known as conditional statements. A condition is used to decide which set of statements is to be executed between two alternative sets of statements. Therefore, these statements are also called selective statements or decision control statements.

5. Syntax :

```
if(condition):  
    statement  
elif(condition):  
    statement  
.  
else:  
    statement
```

6.



Flowchart of Python Nested if Statement



A.

```

Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 7 page 88 pics/A.py =====
Enter a First Number:5
Enter a Second Number:9
Second number is greater than first number
>>>
Ln: 8 Col: 0

```

B.

```

Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 7 page 88 pics/B.py =====
Positive number
>>> |
Ln: 6 Col: 0

```

C.

```

Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 7 page 88 pics/C.py =====
Above ten
and also above 20.
>>>
Ln: 7 Col: 0

```

D.

```

Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 7 page 88 pics/D.py =====
b is not greater than a
>>> |
Ln: 6 Col: 0

```



Leading space or tab at the beginning of the line is considered as indentation level of the line, which is used to determine the group of statements. Statements with the same level of indentation are considered as a group or block.

Indentation is the most significant concept of the Python programming language. Improper use of indentation will end up "**IndentationError**" in our code.

Indentation Rules

- Use the colon (:) to start a block and press Enter.
- All the lines in a block must use the same indentation, either space or a tab.
- Python recommends four spaces as indentation to make the code more readable. Do not mix space and tab in the same block.
- A block can have inner blocks with next level indentation.

Example : The lines `print ("Today is Monday")` and `print ("Today is Tuesday")` are two separate code blocks. The two blocks of code in our example if-statement are both indented four spaces. The final `print ("Month of March")` is not indented, so it does not belong to the else block.

```

E1.py - C:/Users/HP/Desktop/digiware 7...
File Edit Format Run Options Window Help
a = "bcd"
if a == "bcd":
    print("Today is Monday")
else:
    print("Today is Tuesday")
print("Month of March")
|
Ln: 7 Col: 0

```

```

IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4
2023, 23:49:59) [MSC v.1934 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "licen
se()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digi
ware 7 page 88 pics/E1.py =====
Today is Monday
Month of March
>>> |
Ln: 7 Col: 0

```




Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (a) 3. (a) 4. (b) 5. (c)

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. T 5. F

C. Fill in the blanks.

1. Photoshop CC 2. Rectangle 3. Workspace
4. .psd 5. Move

D. Answer the following questions.

1. Adobe Photoshop CC is an image-editing software designed to modify and enhance the quality of images. It has been developed by Adobe, a computer software company in California, US. Photoshop is a popular software used to edit photographs and pictures. Photoshop CC, a part of the Adobe Creative Cloud, is the latest version of this software.

We Use Photoshop for the following reason:

- (a) You can create graphics containing both images and text.
 - (b) You can design graphics for a web page or a website.
 - (c) You can create photographs that look deceptively real (actually are not real), You can enhance a photograph by correcting its flaws and imperfections.
 - (d) It is used to create a photo collage, that is, to combine various photographs into one single file.
 - (e) It is used for making layouts for newsletters, magazines, newspapers, etc.
2. See topic 'Components of The Adobe Photoshop CC' on book page no-92.
3. Follow the steps given below to crop an image.

Step 1 : Open an image in Photoshop which you want to crop.

Step 2 : Select the **Crop tool** from the Tools panel. Photoshop automatically places a **crop box** and **handles** around your image. Handles can be seen in each of the four corners as well as in the middle of the sides.



Using Crop Tool

Step 3 : Just drag these handles to crop the image according to the requirement and press **Enter** key when done.

Step 4 : Don't forget to uncheck the **Delete Cropped Pixels** checkbox in the **Options** bar to be able to change the crop selection later on.

4.	<p>Lasso Tool</p> <p>The Lasso Tool helps you to select an irregular area of an image by drawing a free-hand selection border. This tool is also called freehand selection tool.</p>	<p>Rectangular Marquee Tool</p> <p>It is used to select a rectangular or square area of an image.</p>
----	--	--

5. See topic 'Background and Foreground Colors' on book page no. 101.

Fun Activity



See Picture on book page no. 92.

HOTS



Do yourself

9

AI for SDGs



Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (a) 3. (c) 4. (a) 5. (c)

B. State true 'T' or false 'F'.

1. T 2. T 3. F 4. T 5. T

C. Fill in the blanks.

- | | | |
|--------------|-----------|------------|
| 1. Pillars | 2. SDGs | 3. Poverty |
| 4. Education | 5. Goal 5 | |

D. Answer the following questions.

- SDG 16 aims to guarantee justice and freedom for all people by 2030. The target is to significantly reduce all forms of violence with communities and governments to end conflict and insecurity.
- SDG 1's target is to end extreme poverty globally by 2030.

AI technology is helping a lot in achieving the first goal of sustainable development because poverty-stricken areas can be easily captured or identified through satellite images. Using these images, the government can easily identify the location of poor people and help them through various schemes in lifting out of poverty.

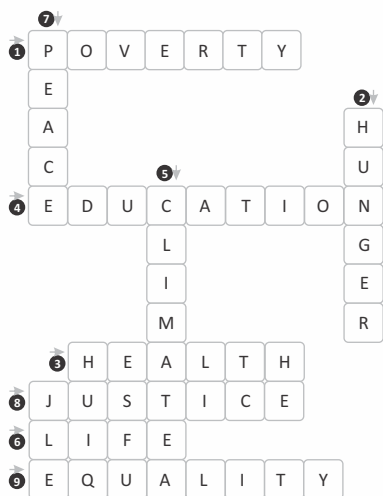
- On the basis of different criteria such as context and level of decision-making, the three elements of sustainable development are given below.
 - Social
 - Economic
 - Environmental

These three elements are interconnected and also known as the pillars of sustainability. These pillars are informally referred to as people, profit and planet. Various topics come under the categories of these three elements.



- We need to provide equal access to resources.
 - Equal access to education.
 - Equal power and property to women.
- (a) Sustainable Development Goals
(b) Artificial Intelligence

Fun Activity



HOTS



Goal 4

Computer Network**Let's Do This****A. Multiple Choice Questions.**

1. (b) 2. (c) 3. (b) 4. (a) 5. (c)

B. State true 'T' or false 'F'.

1. F 2. F 3. F 4. T 5. T

C. Fill in the blanks.

1. Hardware, Software 2. Hub 3. Ring 4. MAN 5. Wireless

D. Answer the following questions.

1. A computer network is a collection of computers and other peripherals which are connected with a communication channel, like cables or wireless media.

Computer networks are helpful for sharing various resources and information among different users working on different computers. They bring efficiency, economy and effectiveness in any organization.

Following are the advantages of a computer network:

- Helps in communication-via email, video conferencing, instant messaging, etc.
 - Reduces cost- It enables multiple users to share a single hardware device like a printer or scanner.
 - Enables all types of file (text, audio, video, etc.) sharing across the network-Many users can access the same file. It also allows sharing of software or operating programs on remote systems.
 - Efficient storage of data-Data can be stored in a central network drive which can be shared by everyone.
2. See topic 'Types of Networks' on book page no-9.

3. (a)	LAN <ul style="list-style-type: none"> • LAN stands for Local Area Network. • It spans over a limited geographical area such as school, office or home. • The transmission speed of LAN is high. • It can be controlled by a single person or an organisation. 	WAN <ul style="list-style-type: none"> • WAN stands for Wide Area network. • It spans over a large geographical area such as a country or even over in continental distances. • The transmission speed of WAN is low. • WAN might not be owned by one organization.
--------	---	--

3. (b)	Ring Topology <ul style="list-style-type: none"> • Each node is connected with the adjacent nodes in a circular chain using a single cable. • The data flows in the chain in only one direction and passes through all the nodes until it reaches its destination. 	Star Topology <ul style="list-style-type: none"> • All the computers are connected to a central device called hub or switch. • All the information passes through the hub or switch before it can be transferred to the destination.
--------	---	---

4 (a) **Network Interface Card (NIC)** : Also known as a LAN Card or Ethernet Card. It is the most important component of the networking hardware. It provides a hardware interface between the network and the computer. It connects a computer to a cable, which in turn links all the computers on the network together. Information from the computer is transmitted through NIC connected on the motherboard of CPU.

(b) **Router** : A router is a network device which is responsible for routing traffic from one network to another network. These two networks could be a private company network or a public network. We can think of a router as a traffic police who directs different network traffic to different directions.

(c) **Hub** : Hub is a central controller device which provides the connection for all the computers on a network.

5. See topic 'Network Security' on book page no- 13.

Fun Activity



G	P	S	Y	Q	T	Z	P	N	R
Z	T	N	T	N	O	Y	R	T	E
Y	M	Q	S	E	P	R	O	Y	P
B	L	U	E	T	O	O	T	H	E
R	A	K	N	W	L	U	O	U	A
I	N	W	D	O	O	T	C	B	T
D	Z	A	E	R	G	E	O	Z	E
G	Y	N	R	K	Y	R	L	Q	R
E	M	A	I	L	M	N	P	A	N

HOTS



Bluetooth technology, Wi-Fi

2

Learn to Use MS-Access 2016



Let's Do This

A. Multiple Choice Questions.

- (c)
- (a)
- (b)
- (a)
- (c)

B. State true 'T' or false 'F'.

- T
- T
- T
- F
- T

C. Fill in the blanks.

- RDBMS
- redundancy
- Field
- one
- value

D. Answer the following questions.

- A database or an electronic database refers to an organized collection of data stored on a computer in such a way that its contents can be quickly accessed, updated and queried with the help of a software program.

Two advantages of database are given on next page:

Sharing of Data : Different users can access the same database according to their needs.

No Data Inconsistency : It helps to avoid data inconsistency. It means if a single database is used by multiple users, then it also ensures that the same data is present for all the users.

2. See topic 'Relational Database Management System (RDBMS)' on book page no- 18.
3. Primary key is a unique feature of Database Management System. This is a field which can uniquely identify each record in a table. The value in primary key is different for every record. A table can have only one primary key. The primary key ensures that there is no data duplication inside the table. It is used to relate the table's record to those in another table.

4.	Design View	Datasheet View
	The Design view is useful to specify the design (field names, their data types and field properties) of a table or to modify the design of an existing table.	In Datasheet view, tables are seen exactly the way they are. We generally use this view for creating tables, entering data into them and also for editing data.

5. See topic 'Creating Tables in a Database' on book page no. 22.

Fun Activity



1.	Object	Purpose
	Database	It is an organized way to storing data & record keeping in a computer.
	DBMS	Database Management System (DBMS) is a software that helps to manage large amount of data.
	Query	With this, you can display the records that match certain criteria.
	Reports	Reports are used to collect the summarised data from one or more tables/queries and organise it in a printable form.

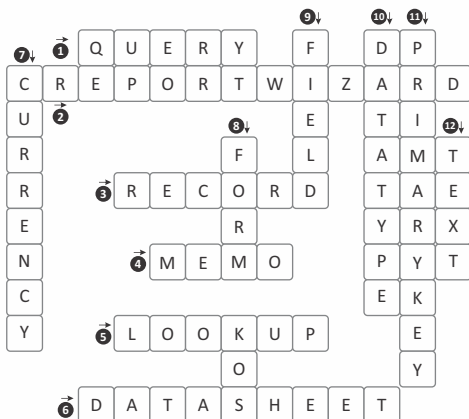
2. Write down the missing steps in the blank boxes to define the primary key in a table.

1. Open the table in Design view.
2. Select the field by clicking on that field selector column. That field will be highlighted. Right click on the field header.
3. Click on the Primary Key option. The selected field will be set as the primary Key.

HOTS



Roll no field can be used for making the primary key.





He should use Report in Access.

4

Images, Links and Forms in HTML



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (b) 3. (b) 4. (b) 5. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. F 5. T

C. Fill in the blanks.

1. ALT 2. URL 3. Hyperlinks
4. <OPTION>, <SELECT> 5. <TEXTAREA>

D. Answer the following questions.

1. HTML Allows us to insert images inside the web pages through the tag.
2. HREF (Hypertext Reference) attribute specifies the destination of a link and is given by the URL.
3. Hyperlink is usually a word, a group of words or an image that when clicked links to a new document or a new section within the current document.

Anchor tag is used for creating hyperlinks in HTML web pages. It is a container tag and used as <A> Hyperlink Text . Where, Hyperlink Text is a text or an image.

4. The <TEXTAREA> tag is used to create a multiline text box that can accept long text values. We can specify the number of rows and columns we want in text area by using the ROWS and COLS attributes of the <TEXTAREA> tag.

Example :

```

<html>
<head>
<title> LOGIN FORM </title>
</head>
<body>
<center> <h1> Registration Form </h1> </center>
<br>
Name: <input type="text"> <br><br>
Father's Name: <input type="text"> <br><br>
Age: <input type="text"> <br><br>
GENDER : <input type = "Radio" NAME = "gender"> Male <input type = "Radio" NAME =
"gender"> Female <br><br>
Address:<TEXTAREA ROWS="4" COLS="80"> </TEXTAREA> <br><br>
Hobbies: <br>
<input type = "Checkbox"> Dancing <br>
<input type = "Checkbox"> Reading <br>
<input type = "Checkbox"> Playing <br>
<br>
Enroll for Class:
<select>
<option> Class 1
<option> Class 2
<option> Class 3
<option> Class 4
<option> Class 5
<option> Class 6
<option> Class 7
<option> Class 8
</select>
<br>
<br>
<input type="submit" value="SUBMIT">
<input type="reset" value="RESET">
</form>
</body>

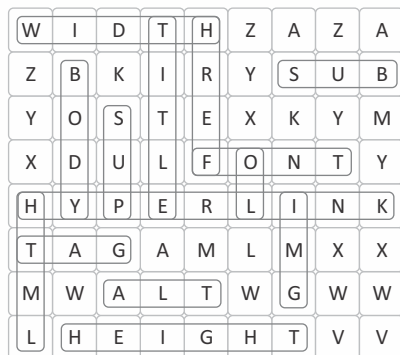
```

HTML code for <TEXTAREA>, <SELECT>, <SUBMIT>, <RESET> and <OPTION> tags

Web browser displaying the output

5. See topic 'Submit/Reset Box' on book page no- 52.

Fun Activity



HOTS



<html>

<head>

<title>hyperlink</title>

</head>

<body bgcolor="pink" text="red">

<Ahref = https://www.google.com> My best friend

</body>

</html>



Let's Do This

A. Multiple Choice Questions.

1. (b) 2. (b) 3. (b) 4. (b) 5. (b)

B. State true 'T' or false 'F'.

1. T 2. T 3. F 4. T 5. T

C. Fill in the blanks.

1. Library 2. Instance 3. Layers 4. Masking 5. Motion


D. Answer the following questions.

1. A symbol is a reusable object that we can use for special effects, animation, or interactivity. Symbols are stored in the Library panel. When we drag a symbol, Animate creates an instance of a symbol.

An Instance is a copy of a symbol, which is located on the stage. A symbol can contain JPEG image, drawings, etc.

2. A symbol is a reusable object that we can use for special effects, animation; or interactivity.

To create a symbol, see topic 'Creating a symbol' on book page no 57.

3. To insert a new layer, click on New Layer  button from the Timeline panel. You can also insert new layer by clicking on Insert → Timeline → Layer. A new layer on top of the selected layer.

4. (a)

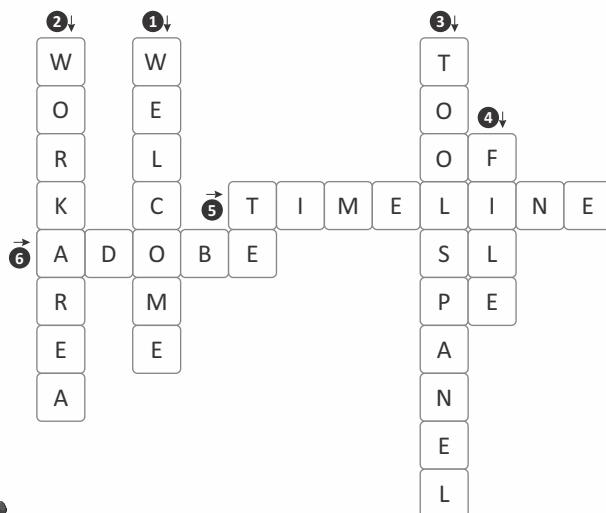
Frame by Frame Animation	Tweened Animation
This animation technique allows you to specify a different art for each frame in the Timeline. Use this technique to create an effect that is like the frames of a film being played in rapid succession. When the frames are played one after the other, the effect of movement or animation becomes visible. This technique is useful for a complex animation where the graphic elements of each frame must be different.	The word Tween is derived from the word 'in-between'. The movement of an object in between the frames is called Tween. In Tween animation, only the starting and ending key frames are created and the rest is done by the computer, which creates the shortest path between the frames.

4. (b)

Motion Tween	Shape Tween
Motion Tween is one of the basic animation techniques. It refers to any object that travels from one point to another and involves no change in the shape or size of the object over a period of time. However, changes may occur in colour, texture or distance of the objects.	Shape tween is similar to making one shape appear to change into another shape over time. By tweening shapes, you can create an effect similar to morphing (making one shape appear to change into another shape over time.)

5. Masking in Animate is used to hide a selected part and display content instead on a layer. Masking enables us to control the content that is visible to the audience. In order to create a Spotlight effect, we can create a circular mask and have the audience only view the content within the circular area. This enables the audience to focus on the important content in the project/graphics.

Fun Activity



HOTS



See topic 'Creating a Symbol' on book page no- 57.



Let's Do This

A. Multiple Choice Questions.

1. (a) 2. (b) 3. (c) 4. (c) 5. (a)

B. State true 'T' or false 'F'.

1. F 2. T 3. F 4. T 5. F

C. Fill in the blanks.

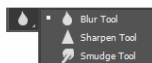
1. Retouching 2. Clone stamp 3. Vertical Type Text
4. Background 5. Warping

D. Answer the following questions.

1. Dodge tool is used to make the darker portions of the image lighter while Burn tool is used to darken areas of an image and sponge tool affects their saturation.
2. See topic 'Retouching Tools' on book page no- 80.
3. Spot Healing Brush Tool is used to quickly repair imperfections such as blemishes, scars, unwanted marks and other imperfections in photographs.
4. The Blur Tool is a great way to create effects in a photograph. This tool can blur or soften an image or part of an image. The steps are as follows.

Step 1 : Open any image. Select the **Blur Tool** from the Tools panel.

Step 2 : Select the desired Blur Tool size, mode, and strength from the Context menu.



Step 3 : Select the layer that you wish to work on from the **Layers** menu.

Step 4 : Drag the tool over the image you want to blur by holding the left mouse button. The more you move the brush over a portion of the image, the more blurred it will become.



Original Image



Using the Blur Tool

5. See topic 'Layers in Photoshop' on book page no- 75.

Fun Activity



- a. Layers Panel
- b. Delete Layer
- c. Overscroll
- d. Blur Tool
- e. Eyedropper Tool

HOTS



Clone Stamp Tool



Functions and String in Python



Let's Do This

A. Multiple Choice Questions.

- 1. (c)
- 2. (c)
- 3. (c)
- 4. (a)
- 5. (c)

B. State true 'T' or false 'F'.

- 1. F
- 2. T
- 3. T
- 4. T
- 5. T

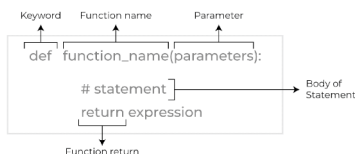
C. Fill in the blanks.

- 1. Function
- 2. Built in
- 3. Argument
- 4. Integer
- 5. *

D. Answer the following questions.

- 1. Python Functions is a block of statements that return the specific task. The idea is to put some commonly or repeatedly done tasks together and make a function so that instead of writing the same code again and again for different inputs, we can do the function calls to reuse code contained in it over and over again.

The syntax to declare a function is:



This is a function definition that consists of the following components.

- (a) Keyword def that marks the start of the function header.
- (b) A function name to uniquely identify the function.
- (c) Parameters (arguments) through which we pass values to a function. They are optional.

- (d) A colon (:) to mark the end of the function header.
 - (e) One or more valid python statements makes up the function body.
 - (f) Statements must have the same indentation level (usually 4 spaces).
 - (g) An optional return statement can be used to return a value from the function.
2. The Python return statement is used to return the output from a function.
3. See topic 'Calling a Python Function' on book page no- 90.
4. A sequence of characters which is enclosed or surrounded by single (") or double (") quotes is known as a string. The sequence may include a letter, number, special characters or a backslash.
- Python treats single quotes as double quotes.
5. **lower():** Converts all uppercase characters in a string into lowercase
upper(): Converts all lowercase characters in a string into uppercase

Fun Activity



1.

```
IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 8 page 98/1.py =====
Hello World!
Hello World!
>>>
```

2.

```
IDLE Shell 3.11.3
File Edit Shell Debug Options Window Help
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr 4 2023, 23:49:59) [MSC v.1934 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/HP/Desktop/digiware 8 page 98/2.py =====
4 is maximum
>>> |
```


3.

```
Python 3.11.3 (tags/v3.11.3:f3909b8, Apr
4 2023, 23:49:59) [MSC v.1934 64 bit (AMD6
4)] on win32
Type "help", "copyright", "credits" or "li
cense()" for more information.

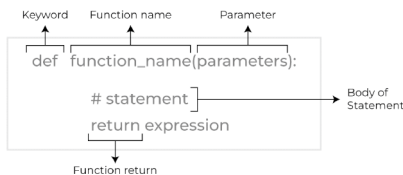
>>>
===== RESTART: C:/Users/HP/Desktop
/digiware 8 page 98/3.py =====
27
>>>
```

4.

```
Learn
Learn
Learn
Learn
Learn
Learn
Learn
Learn
Learn
Learn
Learn
>>>
```

5.

```
Python 3.11.3 (tags/v3.11.3:f3909b8
, Apr 4 2023, 23:49:59) [MSC v.193
4 64 bit (AMD64)] on win32
Type "help", "copyright", "credits"
or "license()" for more information
.
>>>
===== RESTART: C:/Users/HP/
Desktop/digiware 8 page 98/5.py ==
=====
a
>>>
```





Let's Do This

A. Multiple Choice Questions.

1. (b) 2. (c) 3. (c) 4. (b) 5. (c)

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. F 5. T

C. Fill in the blanks.

1. Blogging 2. C2C 3. Flipkart
4. Microblogging 5. Digital Wallet

D. Answer the following questions.

1. Amazon.com, Flipkart.com, Sanpdeal.com, Alibaba.com
2. Three different types of people are involved with commerce. They are:
- Producers ▪ Sellers ▪ Buyers

Commerce revolves around these categories of people.

- Producers are the people who produce different kinds of products or items and provide services.
 - Sellers are the people who sell items or goods and give services to the people.
 - Buyers are the people who purchase items and services.
3. A **blog** (short for "weblog") is an online journal or informational website run by an individual, group, or corporation that offers regularly updated content (blog post) about a topic. It presents information in reverse chronological order and it's written in an informal or conversational style. The entries that appear on a blog are called **posts**, and the act of publishing a blog is called **posting**. A single person who owns and maintains blogs is known as a **blogger**.

4.

Business-to-Business (B2B)	Business-to-Consumer (B2C)
This refers to a company selling or buying products or services to/from other companies. For example, a company that manufactures cars uses the Internet to	This refers to the transaction that takes place between a company and a consumer. The company establishes website for its products and services so that the customer can order any products or services and gather

purchase tyres from their supplier or manufacturer.	information about them. With B2C business model, sellers can sell products directly to consumers, without using traditional retail channels. This enables companies to sell products at a lower cost with quick service.
---	--

5. Digital wallets, such as PayPal, Apple Pay, and Google Pay, have become increasingly popular. They allow customers to store payment information securely and make payments with just a few clicks. According to Statista, digital wallets started pacing alongside credit cards for the first time in 2020 as the most popular online payment method in the US, and it's a trend that has only continued.

Fun Activity



- (A) Business -to-Consumer

(B) Business -to-Business

(C) Business -to-Employee

(D) Consumer-to-Consumer

(E) Electronic Funds Transfer

(F) Cash on Delivery
-

B	R	N	V	V	Z	B	H	C	Q
L	W	M	B	C	X	U	G	R	W
O	A	J	L	A	C	Y	T	A	T
G	E	C	O	M	M	E	R	C	E
G	D	Q	G	A	E	R	A	L	E
E	C	R	G	S	W	S	N	K	W
R	F	Q	I	D	I	O	S	J	A
N	R	P	N	F	X	I	A	H	L
A	Q	L	G	G	A	T	C	G	L
F	L	I	P	K	A	R	T	F	E
I	P	E	S	L	U	D	I	D	T
L	E	T	Z	I	B	L	O	G	F
T	Y	P	E	P	A	D	N	P	X

HOTS



Cash on Delivery (COD)



Let's Do This

A. Multiple Choice Questions.

1. (c) 2. (b) 3. (c) 4. (c) 5. (c)

B. State true 'T' or false 'F'.

1. T 2. T 3. T 4. T 5. T

C. Fill in the blanks.

1. Mystery Animal 2. NLP 3. Google Translate
4. Deep learning 5. Text, Speech

D. Answer the following questions.

1. Machine learning models, continuous learning, generalization and predictive and descriptive analytics are dependent on massive data sets. The more diverse and comprehensive the data, the better AI can perform. This is why data is often referred to as the 'training Fuel' for AI.

2. "Natural Language Processing is the ability of computer program to understand the human languages as it is spoken."

NLP is all about algorithms to understand and interpret speech and text which is natural language data.

Its goal is to build systems that can make sense of text and perform tasks like translation, grammar checking, or topic classification.

3. **Google Assistant** : Google Assistant can connect to all smart devices that make use of the Android operating system. It helps its users in managing tasks, planning a day, searching images, and answering queries.

Google Maps : Google Maps is an application that is widely used for navigation. It helps the users in finding out the directions to reach a certain location. It also shows information related to traffic in real-time, suggests alternate routes if you are travelling by foot, car, train, bicycle, and air. You can take directions by Google Maps by just pressing the mic button and speaking.

4. See topic 'Applications of computer Vision' on book page no- 115.
5. Facebook, MRI, Self-driving vehicles, CCTV cameras, biometric machine, Google Translate.

Fun Activity



The machine plays an audio file in response to the human.

6

The human says something to the machine.

1

The processed data is converted back to audio.

5

The captured audio is converted to text.

3

The machine captures the audio.

2

The text's data is processed.

4

HOTS



(a) TEHOLOGYNC – TECHNOLOGY

(b) ITLNLIEGETN – INTELLIGENT