

Drag and

Drop

Class - 8

logical operations can be applied to it without causing an error.

13. Interactive mode is a command line shell which gives immediate response to each statement, whereas Script mode is used to write longer Python codes. Interactive mode has three arrows >>> as prompt, whereas in Script mode the prompt is .py.
14. The main difference between supervised and unsupervised machine learning is that supervised machine learning uses labelled data while unsupervised machine learning does not use such data.
15. (a) Buddy: It is a companion robot designed to entertain the family. This endearing emotional robot wins the heart of every member of the family, including children and adults. As a real companion, it can walk around house like a pet.
(b) Sophia: It is a social humanoid robot developed by Hong Kong-based company Hanson Robotics. It is capable of imitating human gestures and thus is capable in answering questions. She has been given official citizenship in Saudi Arabia. The United Nations has given her the title of Innovation Championship. Sophia has appeared in several high-profile interviews and appearances.

Cyber Olympiad

Choose the correct option.

- | | | |
|---------|----------|---------|
| 1. (c) | 2. (b) | 3. (a) |
| 4. (d) | 5. (d) | 6. (a) |
| 7. (b) | 8. () | 9. (b) |
| 10. (c) | 11. (b) | 12. (b) |
| 13. (c) | 14. BYRE | 15. (d) |
| 16. (d) | 17. (d) | 18. (d) |
| 19. (c) | 20. (a) | 21. (b) |
| 22. (d) | 23. (d) | 24. (d) |
| 25. (a) | | |

Class 8

Chapter 1 : Computer Virus

Activity Time

1. MV
2. BV
3. PV

4. TH
5. W
6. MRV
7. PV
8. TH
9. PV
10. MRV

Brain Teaser

1. The full form of VIRUS is **Vital Information Resources Under Seize**.
2. The first virus to ever be identified was known as the **Creeper**.
3. Acid Rain is an example of **Program Viruses**.
4. **Worms** generally spread through e-mails and networks.

Let's Review

- A. Tick (✓) the correct option.
 1. (c)
 2. (a)
 3. (c)
 4. (a)
 5. (c)
- B. Fill in the blanks.
 1. A **virus** can destroy files, software and program applications.
 2. A virus can **reproduce** itself without any user action.
 3. **Macro** viruses infect files that are created using certain applications or programs.
 4. Stoned virus is an example of **Boot viruses**.
 5. **Commwarrior** was the first known cell phone virus.
 6. You can prevent virus infections by using **Antivirus software**.
 7. **Memory Resident** virus get control over the system memory.
- C. Answer the following questions.
 1. A computer virus is a type of computer program that has replicating capabilities. When executed, it replicates itself by modifying other computer programs and causing loss of data.
 2. Some of the sources of computer virus are: Internet, Email attachments, computer network removable devices and Bluetooth transfer
 3. We can know that our computer is attacked by a virus by following symptoms:
 - The computer runs very slow and it takes a long time to start.

- The infected file may make copies of itself. A copy of such a file may be sent to all the addresses in your e-mail address list.
- The virus may reformat your disk drive and delete your files and programs.
- The virus may install hidden programs, such as pirated software.
- The virus may reduce security.
- Windows will not start because of missing certain critical system files.

- A computer worm is a type of malware that has the self-replicating ability. The primary function of worms is to self-replicate and infect other computers while remaining active on infected systems.
- We can prevent a computer from virus infection by following these steps.
 - Install an antivirus software from a well-known and reputed company. Update and use it regularly.
 - Do not install pirated software.
 - Scan removable devices like CD or a pen drive received from another person.
 - Scan files downloaded from the Internet.
- Antivirus is a kind of software used to prevent, scan, detect and delete viruses from a computer.
- Some popular antivirus software are: Quick Heal Total Security, McAfee Antivirus, Kaspersky Antivirus, Norton Antivirus, AVG Antivirus, Avast Antivirus, Trend Micro Antivirus, and Maximum Security.

Activity Time

The students will do it themselves.

Brain Teaser

- C R E O P E R
- R E L A X
- M E M O R Y R E S I D E N T
- T O R Z A N H O R S E

Brain Teaser

- 0011
- 0111
- 1011
- 1110

Activity Time

- $0 + 0 = 0$
- $0 \times 0 = 0$
- $0 + 1 = 1$
- $1 \times 0 = 0$
- $1 + 0 = 1$
- $1 \times 1 = 1$
- $1 + 1 = 10$
- $1 \times 1 = 1$

Rapid Fire

- You can perform calculations on binary number.
- The hexadecimal number system has the base 16.
- The binary number system consists of two digits, i.e., 0 and 1 and has the base 2.
- The octal number has the base 8.

Activity Time

- $$\begin{array}{r} 1 \quad 1 \\ + 1 \ 0 \ 1 \\ \hline 1 \ 1 \ 0 \ 0 \end{array}$$
 - $$\begin{array}{r} 1 \ 1 \quad 1 \\ + 1 \ 1 \ 0 \ 0 \\ \hline 1 \ 1 \ 0 \ 1 \ 0 \end{array}$$
 - $$\begin{array}{r} 1 \ 1 \ 1 \ 1 \ 1 \\ + 1 \ 0 \ 1 \ 0 \ 1 \\ + 0 \ 0 \ 1 \ 1 \ 1 \\ \hline 1 \ 0 \ 1 \ 1 \ 0 \ 0 \end{array}$$
 - $$\begin{array}{r} 1 \quad 1 \\ + 1 \ 1 \ 0 \ 1 \\ \hline 1 \ 0 \ 1 \ 1 \ 0 \end{array}$$
- $$\begin{array}{r} \quad \quad 1 \ 1 \ 1 \\ \times \quad 1 \ 1 \ 1 \\ \hline \quad 1 \ 1 \ 1 \\ + \quad 1 \ 1 \ 1 \\ + 1 \ 1 \ 1 \\ \hline 1 \ 1 \ 1 \ 0 \ 0 \ 1 \end{array}$$
 - $$\begin{array}{r} \quad 1 \ 1 \ 0 \\ \times \quad 1 \ 0 \\ \hline \quad 0 \ 0 \ 0 \\ + 1 \ 1 \ 0 \\ \hline 1 \ 1 \ 0 \ 0 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{cccc} & 1 & 0 & 1 & 0 \\ & \times & 1 & 0 & 1 \\ \hline & 1 & 0 & 1 & 0 \\ + & 0 & 0 & 0 & 0 \\ \hline 1 & 0 & 1 & 0 & \\ \hline 1 & 1 & 0 & 0 & 1 & 0 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(d)} \quad \begin{array}{cccc} & 1 & 0 & 1 & 1 \\ & \times & 1 & 0 & 1 \\ \hline & 1 & 0 & 1 & 1 \\ + & 0 & 0 & 0 & 0 \\ \hline 1 & 0 & 1 & 1 & \\ \hline 1 & 1 & 0 & 1 & 1 & 1 \end{array}
 \end{array}$$

3. (a) $1001 = 1 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0$
 $= 8 + 0 + 0 + 1$
 $= 9.$

(b) $1100 = 1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 0 \times 2^0$
 $= 8 + 4 + 0 + 0$
 $= 12.$

4. (a) Dividing 232 by 16, we get quotient 14 and remainder 8.

Thus, $(232)_{16} = E8.$

(b) Dividing 111 by 16, we get quotient 6 and remainder 15.

Thus, $(111)_{16} = F6.$

5. The complete table is given below.

Decimal	Binary	Decimal	Binary
0	0000	4	0100
1	0001	5	0101
2	0010	6	0110
3	0011	7	0111

Let's Review

A. Answer the following questions.

- Binary data is a type of data that can be represented in the binary numeral system.
- An analog computer uses a continuous signal to process, whereas a digital computer uses a discrete signal for its operation.
- A number system with its base as 8 is called an octal number system. It uses numbers from 0 to 7.

4. A string is a sequence of characters written one after another. It can have letters, numbers, symbols and even spaces. For example, 26T5 is a string of 2, 6, T and 5.

5. A system that represents or expresses numbers is called a number system. The most commonly used number systems are decimal number system, binary number system, octal number system, and hexadecimal number system.

6. A number system which has its base as 8 is called an octal number system. It uses numbers from 0 to 7. For example, 5249 and 72

7. To convert a decimal to a binary number, follow the steps given below:

- Divide the given decimal number by 2. It gives the result along with the remainder.
- If the given decimal number is even, the result will be whole and the remainder 0.
- If the given decimal number is odd, it will not be divided properly and it gives the remainder 1.
- Placing all the remainders in such a way that the least significant bit is at the top and most significant bit at the bottom. The number so obtained is the required binary number.

Chapter 3 : More on Flash

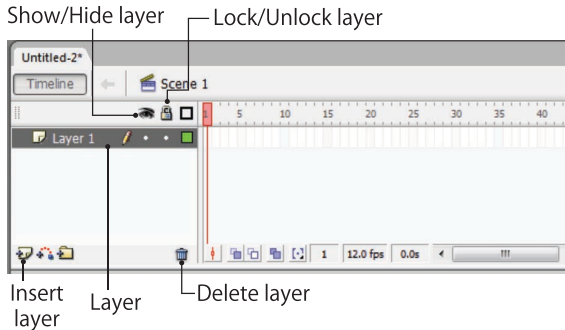
Activity Time

Components of Flash window are circled in the grid.

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

Activity Time

The complete labelled picture is given below.



Let's Review

A. Tick (✓) the correct option.

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

B. Write T for true and F for false for the following statements.

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

C. Answer the following questions.

1. Flash is an animation software which can be used to create animations, games, cartoons, websites, graphic effects, text effects and special effects. It is one of the most popular technologies on the Internet.
2. Timeline is a feature of Flash which is used to create or edit animations. It contains frames which play an important role in making animations.
3. The Pen tool used for many purposes such as to draw precise paths, such as straight lines or smooth flowing curves.
4. Steps for using the Pen tool:
 - Click the Pen tool from the Tool box.
 - Click the Stage to set the first anchor point.
 - Click another point to set second anchor point of the Stage. Flash will automatically connect both the anchor points.
 - Click again to set more anchor points on the stage.
 - Position the Pen tool over the first anchor point and click it. Flash automatic adds a fill once the path becomes a closed outline.

5. Steps to import a picture in Flash:

- Click the File menu. A menu appears.
- Point to Import option. A menu appears.
- Click the Import to Stage option. The Import dialog box appears.
- Select the picture and click the Open button.

The image will be added to the Stage.

6. Free Transform tool can be used to increase or decrease the size of objects, move and rotate objects.

7. In animation, a layer is made up of many small rectangles which are separated by lines. Such small rectangles are called **frames** and lines are called **framelines**. Each frame contains a single image in sequences of images, which when played together create animation. A **keyframe** is a frame where a new object appears in the Timeline.

8. A motion tween is a type of animation that uses symbols to create movement, size and rotation changes, fades, and colour effects.

9. In Flash, the Break Apart option is used to break text into individual characters.

10. In Flash, symbols are used for creating animations. Objects that we draw in Flash can be converted into symbols which help in creating animation in easier way.

Brain Teaser

1. F R A M E S
2. F R E E T R A N S F O R M
3. P E N
4. S T A G E
5. B U T T O N S Y M B O L S

Activity Time

1. Options tool, Circle tool, Pen tool, Eyedropper tool
2. Rectangle tool, Circle tool, Eyedropper tool
3. Options tool, Circle tool, Pen tool, Color tool
4. Rectangle tool, Pen tool

Activity Time

HTML tags and attributes used to design the given page are:

1. <html>
2. <head>
3. <title>
4. <body>
5. <h1>
6. <hr size=8 width=100%>
7. <color>
8. <p>

Activity Time

HTML tags and attributes are circled in the alongside grid.

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

Rapid Fire

1. HTML stands for HTML stands for Hyper Text Markup Language.
2. Font tag is used to change font size
3. The BACKGROUND attribute of the <body> tag is used to place an image as a background.
4. <hr> tag is used to draw a horizontal line on the web page.

Let's Review

- A. Tick (✓) the correct option.
1. (c)
 2. (a)
 3. (a)
 4. (a)
 5. (a)
 6. (b)
- B. Name the following tags.
1. Empty tag
 2. Underline text tag
 3. Image tag
 4. Anchor tag
 5. Italic text tag
 6. Bold text tag
- C. Write T for true and F for false for following statements.
1. F
 2. F
 3. T
 4. T
 5. T
 6. T
- D. Answer the following questions.
1. HTML, stands for Hyper Text Markup Language, is a standard markup language for

creating web pages to display on World Wide Web. Web pages are text documents which have HTML commands with an extension .html. HTML is a character-based method for describing and expressing the controls of a document. The content may be pictures, text, sound, etc.

2. The 'hr' tag in HTML stands for horizontal rule with syntax <hr>. It is used to insert a horizontal rule on the web page to separate different parts of the text from one another. It is an empty tag and it does not require an end tag.
3. To change the size and the width of horizontal line, type the HTML codes given on the next page and see the output on the Internet Explorer.

```
<html>
<head>
<title> HTML </title>
</head>
<body>
<h1> HTML </h1>
<hr size=10 width=100%>
<p>HTML stands for HyperText Markup Language. It is a markup language that is used for creating web pages to display on World Wide Web. </p>
</body>
</html>
```

4. We use the BACKGROUND attribute of the <body> tag to place an image as a background. For it, type the HTML codes given below and see the output in Internet Explorer.

```
<html>
<head>
<title>DOLPHIN</title>
</head>
<body>
<body background="D:\My work \dolphins.jpg"/>
</body>
</html>
```

5. A hyperlink, or simply a link, is a word, group of words, or image that the user can click on to jump to another document. When the user

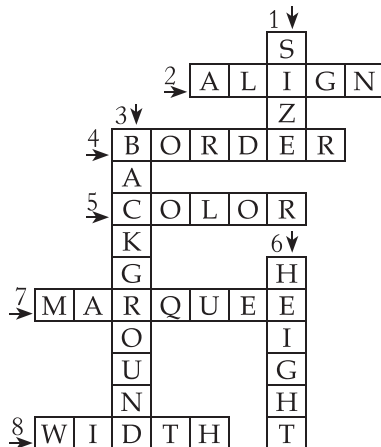
moves the cursor over a link in a web page, the arrow will turn into a little hand.

6. An anchor tag (<a>) is a feature in HTML which defines a hyperlink. It is used to link one page to another.
7. HREF (Hypertext reference) is an attribute of the anchor tag used to create a link to another page, whereas BGCOLOR attribute is used for coloring the background of the document.
8. To create a link on a web page, type the HTML codes given below and see the output in Internet Explorer.

```
<html>
<head>
<title> DOLPHINS </title>
</head>
<body>
<h1><font size="25"> DOLPHINS </font></h1>
<hr size=15 width=100% color=Blue>
<p>Dolphins are actually marine mammals. These amazing marine animals belong to the cetacean family, which also includes whales and porpoises. Dolphins are extremely intelligent and playful animals. </p>
<a href="D:\My work\dolphin.jpg">
Click here to see picture of dolphin</a>
</body>
</html>
```

Activity Time

The complete crossword is given below.



- A. Tick (✓) the correct option.
 1. (d) 2. (a) 3. (b) 4. (b)
 5. (c) 6. (c) 7. (c) 8. (a)
 9. (a) 10. (d) 11. (a) and (b)
- B. Fill in the blanks.
 1. Viruses are written by programmers called **software**.
 2. Amoeba. A is an example of **Program** virus.
 3. Boot virus is also known as **Boot Sector Virus**.
 4. A group of four bits is called **nibble**.
 5. A **string** is a group of characters written one after other.
 6. The **Text** tool is used to write text on the Stage.
 7. **Frmlines** are used for creating animations in Flash.
 8. The **Font** tag is used to format a set of text.
- C. Answer the following questions.
 1. Some computer viruses are: Amoeba.A, Acid Rain, Crazy.A, Relax, Melissa.A, Bablas, Zeus, Netbus, Elkern, Marburg, Satan Bug and Tuareg.
 2. Some of the sources of computer virus are: Internet, Email attachments, computer network removable devices and Bluetooth transfer
 3. Boot Sector Virus is a type of virus that infects the parts of the computer called the system sector or the Master Boot Record (MBR) of hard disks.
 4. Binary data is a type of data that can be represented in the binary numeral system.
 5. A number system which has its base as 8 is called an octal number system. It uses numbers from 0 to 7.
 6. Pen tool is a type of tool that is used to draw precise paths, such as straight and curved lines.
 7. Steps to import a picture on the Stage:
 - Click the File menu. A menu appears.
 - Point to Import option. A menu appears.
 - Click the Import to Stage option. The Import dialog box appears.
 - Select the picture.
 - Click the Open button. The picture is opened on the Stage.

8. Layers are a utility of Flash that helps in organizing animation work (sheets) as a stack in the form of layers one over the other.
9. Steps to insert a keyframe on timeline:
 - Select the desired frame from the **Timeline**.
 - Click the **Insert** option. A menu appears.
 - Point to Timeline and click the **Keyframe** option.

The keyframe gets inserted at the desired place.

10. An anchor tag (<a>) is a feature in HTML which defines a hyperlink. It is used to link one page to another.
 - Open the Control Panel and click the Clock and Region link. Date and Time dialog box appears.
 - Click the **Change time zone** option. A dialog box appears.
 - Click the **Change date and time** button. The **Date and Time Settings** dialog box appears.
 - Make the required changes in date and time of your system and click the **OK** button.
11. To create a link on a web page, type the HTML codes given below and see the output in Internet Explorer.

```
<html>
<head>
<title> DOLPHINS </title>
</head>
<body>
<h1><font size="25"> DOLPHINS </font></h1>
<hr size=15 width=100% color=Blue>
<p>Dolphins are actually marine mammals. These amazing marine animals belong to the cetacean family, which also includes whales and porpoises. Dolphins are extremely intelligent and playful animals. </p>
<a href="D:\My work\dolphin.jpg">
Click here to see picture of dolphin</a>
</body>
</html>
```

Chapter 5 : About Tags in HTML

Activity Time

The students will do it themselves.

Activity Time

The names of tags and attributes used to create tables in HTML are encircled in the grid..

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

Rapid Fire

1. An unordered list is also called a **Bulleted** list.
2. The **Type** attribute can take three values.
3. The **Start** attribute allows you to specify the starting point of the numbering scheme.
4. In **definition** list entries do not have number or bullet in front of them.

Let's Review

- A. Tick (✓) the correct option.
 1. (a) 2. (b) 3. (c)
 4. (a) 5. (b) 6. (a)
- B. Name the following.
 1. Unordered list tag 2. List tag
 3. Ordered list tag 4. Definition list tag
 5. Table tag 6. Table header tag
 7. Table row tag
- C. Name the attributes for the given functions.
 1. bgcolor=#rr/gg/bb 2. valign=/bottom
 3. <tr> tag 4. align=/bottom
 5. height=n/n% 6. align=left
- D. Answer the following questions.
 1. In HTML, a nested list is a list within another list. It means one list can be placed inside of another. For example, the user can nest an

ordered list within an unordered list, and vice versa.

2. A definition list is a list of terms and corresponding definitions. That is, a definition list is used to build a list of definitions. The tags used for creating a definition list are: <dl> for definition list, <dt> for definition list term, <dd> for definition list explanation.

To create a definition list, the HTML code is given below.

```
<html>
<head>
<title> Creating Definition List</title>
</head>
<body>
<dl>
<dt>Photosynthesis</dt>
<dd>Photosynthesis is a process used by plants and other organisms to convert light energy, normally from the sun, into chemical energy that can be used to fuel the organisms' activities.</dd>
<dt>Keyboard</dt>
<dd>A keyboard is the set of typewriter-like keys that enables you to enter data into a computer. Computer keyboards are similar to electric-typewriter keyboards but contain additional keys.</dd>
<dt>Mouse</dt>
<dd>A computer mouse is an input device that is most often used with a personal computer. Moving a mouse along a flat surface can move the on-screen cursor to different items on the screen.</dd>
</dl>
</body>
</html>
```

See its output in the Internet Explorer.

3. The main difference between an unordered list and an ordered list is that in an unordered list, the items are not displayed in a specific order; while in an ordered list, the items are displayed in a specific order.
4. The tag has two main attributes: Type and Start.
5. Tables are the most important utility in HTML. Using tables, we can modify complex

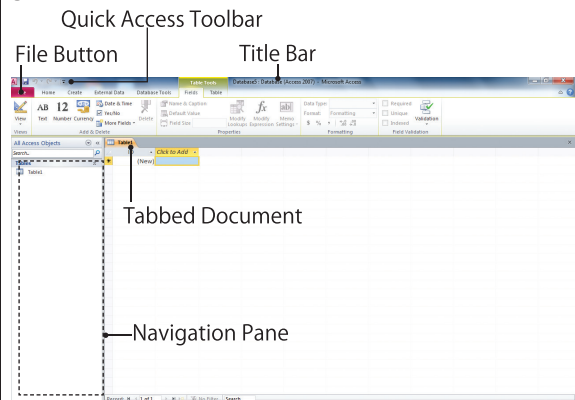
and bulky data easily understandable for the web page visitors.

6. In HTML, BORDER COLOR is used to colour the border of a table, while BG Color is used to apply background colour to the table.
7. Cell spacing means the amount of space between the cells in a table.

Chapter 6 : Microsoft Access

Activity Time

The Access window with labelled components is given below.



Activity Time

Words representing datatypes are circled in the grid given below.

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

Rapid Fire

1. Computerised library system and flight reservation system are two database applications.
2. FoxPro and Microsoft Access DBMS software.

Rapid Fire

1. MS Publisher is a desktop publishing application which can be used to create and design professional looking documents such as newsletters, brochures, flyers, business cards, website, and many more.
2. Yes
3. Yes
4. No. MS Publisher is a desktop publishing application which is different from MS Word because MS Word is a software which mainly works for word processing.

Let's Review

A. Tick (✓) the correct option.

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

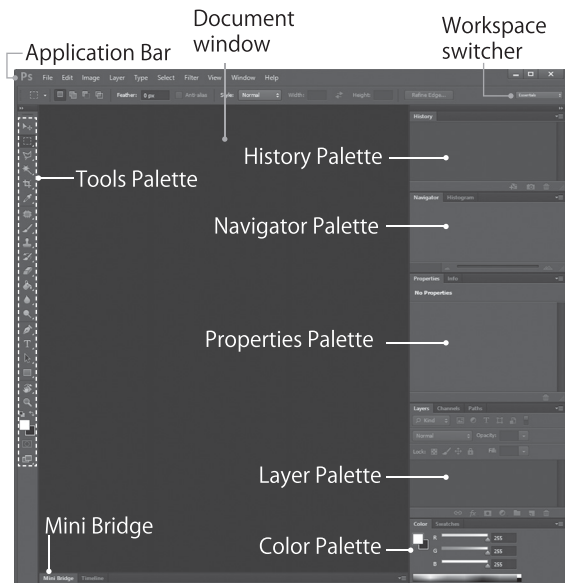
B. Answer the following questions.

1. MS Publisher is a desktop publishing application which help us create and design professional documents such as newsletters, brochures, flyers, business cards, website, and many more.
2. The main tools available in MS Publisher window are: the Title Bar, the Quick Access toolbar, the Ribbon, the Page Navigation Pane, the Publication Page area, and the Status Bar. The Status bar also contains the Page Layout View buttons and the Zoom Slider.
3. Follow these steps to publish a document on the web:
 - Start Microsoft Publisher and open the page you want to convert.
 - From the File menu, select Create Web Site from Current Publication. A dialog box appears.
 - Click the Yes option selecting all pages. Make changes as needed.
 - Select the Yes option when the Design Checker Download Time dialog box opens.

- Click the OK button when the design check is complete. Make changes to the web page.
 - Select Web Properties from the File menu and create the title of the page and other information.
 - Select Save As HTML from the File menu and click the Save option.
4. Formatting the publication means to change the fonts and colours of the publication.
 5. Steps to change Font Schemes:
 - Start the MS Publisher 2010.
 - Click the Page Design tab and click the Font button. A dialog box with different fonts opens.
 - Select the font scheme from the palette and click it. The selected font will be applied to your document.
 6. In MS Publisher, the Picture tools tab helps us edit, modify, crop or change pictures.
 7. Brightness, Contrast, Recolor, and Compress Pictures. The Recolor tool has many options such as Quickly change a picture to shades of a single color, More Variations, Set Transparent Color, and Restore the picture's original colors.
 8. Steps to insert a picture:
 - Start the MS Publisher 2010.
 - Click the **Insert** tab.
 - Click the pictures command button, say Clip Art button from Illustrations group.
 - In the Insert Picture dialog box, browse to find the picture that you want, and then select it.
 - Click the arrow next to Insert, and then click Link to File.
 - Click the required picture to insert it in your publication.The selected picture will be inserted in the publication.

Activity Time

The labelled Photoshop window is given below.



Rapid Fire

1. PhotoWorks can be used for editing images.
2. Move Tool is used to move selected image
3. Type Tool is used to add text.
4. Erase Tool erases a part of an image.

Let's Review

A. Tick (✓) the correct option.

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

B. Name the tools.

1. Crop Tool 2. Gradient Tool
3. Erase Tool 4. Magic Tool
5. Type Tool 6. Lasso Tool

C. Answer the following questions.

1. We use Photoshop for many reasons such as:
 - We can create and edit images or picture using it.
 - We can use it for web designing.
 - We can also use it to create special effects and optimize digital images.
2. Steps to start Photoshop program:
 - Open Photoshop.
 - Click the File tab.

- Click the New option. The New dialog box appears.
- Specify Name, Size, Resolution, Background Contents, and Color.
- Click the OK button.

3. Here are three uses of Photoshop:

- Photoshop can be used to combine different image elements such as photographs, scanned art, text, etc. It can save them as a digital image.
- It can be used to edit digital photographs by making subtle changes, such as adjusting the colour in a scanned photograph.
- It can apply colours or patterns to your images with different brush styles.

4. Steps to select an irregular-shaped area:

- Click the File tab.
- Click the **Open** option. The Open dialog box appears.
- Select the file to be opened.
- Click the **Open** button. The required image gets opened.
- Right-click the Marquee selection tools and select the desired Marquee tool.
- Drag the mouse over the image to select the required area.

5. Tool Palette is a utility of Photoshop. It provides users with various tools, which he/she can use while working on images. In Adobe Photoshop CS6, there are about 70 tools in Tools palette.

6. Crop means to cut short some part of an image. The Crop tool enables the user to crop the image. Here are the steps to used to crop an image.

- Click the File tab.
- Click the **Open** option to open the image to be cropped.
- Click the **Crop** tool.
- Click and drag to select the portion of the image to be cropped and press the Enter key.

The selected portion gets cropped.

- Steps to open Photoshop file
 - Click the **File** tab. A menu appears.
 - Click the **Open** option. The Open dialog box appears.
 - Select the location of the file from the Look in box.
 - Select the desired file and click the **Open** button.

Brain Teaser

- Lasso Tool
- Magic Tool
- Eyedropper Tool
- Zoom Tool

Activity Time

Names of Photoshop tools are circled in the below grid.

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

Chapter 9 : More About Python

Rapid Fire

- In Python, the output of: `print("50%5")` is 50%5.
- false
- The name of operator `!=` is 'is not equal to'.
- false

Let's Review

- A. Tick (✓) the correct option.
- (b)
 - (c)
 - (b)
 - (d)
 - (a), (b) and (c)
- B. Fill in the blanks.
- In Python, the iterative statements are also known as **looping** statements.
 - The while loop is used to execute a block of statements **repeatedly** until a given a condition is satisfied.
 - The operator 'and' is a **logical** operator.

- The 'if statement' allows you to **evaluate** if a certain condition is met.

C. Write T for true statements and F for false statements.

- F
- T
- F
- F

D. Answer the following questions.

- Python language is used for various purposes. Some of them are given below.

- Python is very helpful in games development.
- It is widely used in scientific and numeric computing.
- It is helpful to perform multiple tasks.
- It can be used to develop multimedia applications.
- It can be used to develop different applications like web applications, graphic user interface based applications, software development applications, scientific and numeric applications, network programming, and 3D applications. It makes an interactive interface and easy development of applications.
- Python is the most popular language for Artificial Intelligence and machine-learning projects where machines can mimic human behaviour and most of the human work is being automated by machines.
- Applications of Python programming in education has a huge scope as it is a great language to teach in schools or even learn ourselves.

- In Python, operators are special symbols that carry out arithmetic or logical computation.

Arithmetic Operators are used to perform mathematical calculations like addition, subtraction, multiplication, division and exponential.

Relational operators compare the values on the left and right side of the operator and return the relation as either True or False.

Logical operators are used to combine two or more relational expressions and return a single value as a True (non-zero) or False (zero).

3. The main difference between the for loop and the while loop is that: the **for loop** is used to execute a block of codes in sequence until the condition in the for statement is no longer valid; whereas the **while loop** is used to execute a block of statements repeatedly until a given a condition is satisfied.
4. Conditional statements are utility of Python, which are used to perform actions or calculations based on whether a condition evaluates to true or false. There are three types of conditional statements in Python: If statements, If ... else statement, and If ... elif ... else ... statement.
5. An assignment operator is basically a binary operator that helps in modifying the variable to its left with the use of the value to its right. We utilize the assignment operators to transform and assign values to any variables.

Chapter 10 Artificial Intelligence

Rapid Fire

1. Unsupervised machine learning does not need any labelled data to perform a task.
2. The three virtual personal assistants are: Cortana, Alexa and Siri.
3. Types of supervised machine learning are: classification and regression.
4. The two types of unsupervised machine learning are: clustering and association.

Let's Review

- A. Tick (✓) the correct option.
1. (c) 2. (c) 3. (b)
 4. (c) 5. (c)
- B. Fill in the blanks with the correct words given below.
1. Sophia is a citizen of **Saudi Arabia**.
 2. Sophia is a humanoid designed by **Hong Kong-based** company.
 3. Alexa is a **virtual** personal assistant.
 4. **Regression** is the problem of predicting a continuous quantity output for an example.
 5. Romeo is a human-sized robot that has been designed to assist the elderly people.

C. Write T for true and F for false statements.

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

D. Answer the following questions.

1. In the present day time, artificial intelligence technology is being used by banks and other financial institutions for many purposes such as improving customer service through the use of virtual assistants or credit scoring to correctly determine a borrower's risk. Artificial intelligence is fighting a battle against fraud and money laundering in banking sector.
2. Artificial intelligence has proved a boon in the health sector. The primary aim of health-related artificial intelligence applications is to analyse relationships between prevention or treatment techniques and patient outcomes. Artificial intelligence programs are applied to practices such as diagnosis processes, treatment protocol development, drug development, personalized medicine, and patient monitoring and care. At the time of pandemic disease Covid-19, artificial intelligence had played a vital role in thermal imaging in airports and elsewhere. It is helping recognise infection from computerized tomography lung scans. It has also been used to provide data to track the spread of the disease.
3. Three uses of artificial intelligence in teaching and learning:
 - (a) It is simplifying administrative tasks by reducing the teacher's effort like assessing students' work and grading exams.
 - (b) It is helping school admission boards by automating classification and processing of paper work.
 - (c) It is helping students with immediate feedback and stops them in their tracks if they are straying and improves their understanding of the subject.
4. A robot is a human-shaped machine that can execute specific tasks with little or no human intervention and with speed and precision.
5. A chatbot is a computer program that simulates human conversation through

voice commands or text chats or both, through techniques. An artificial intelligence powered chatbot is basically an attempt to recreate a human. Some examples of chatbot technology are Google Assistant, Cortana, Alexa, Siri, Watson and messaging apps, such as WeChat and Facebook's Messenger.

6. Google Assistant is a virtual assistant that can engage in two-way conversations, whereas Cortana is a voice-enabled virtual assistant that helps Windows 10 users initiate requests, complete tasks and anticipate future needs by surfacing relevant data in a personal context.

Activity Time

The students will do it themselves.

Model Test Paper — II

- A. Tick (✓) the correct option.

1. (d) 2. (c) 3. (a) 4. (c)
5. (b) 6. (a) 7. (c) 8. (b)
9. (a) 10. (b) 11. (b) 12. (b)
13. (a) 14. (a) 15. (c)

- B. Write the descriptions of the following attributes.

Attribute	Description
Align=left/centre/right	This attribute aligns the table to the left, right or centre of the web page.
Bgcolor=#rrggbb	This attribute adds a background colour to the table.
Bordercolor=#rrggbb	This attribute adds a colour to the table's border.
Cellpadding=n	This attribute defines the distance between a cell boundary and its contents.
Cellspacing=n	This attribute adds space between cells.
Width=n/n%	This attribute defines a minimum width of the table.

- C. Answer the following questions.

1. An unordered list, a bulleted list, is a list of items that is used when the items in the list are not to be displayed in a specific order.
2. The Type attribute helps us in selecting numbers, letter, or Roman numerals to give a numbering scheme.
3. To create border on a table, type the HTML code as given below and see the output in Internet Explorer.

```
<html>
<body>
<table border="1">
<tr>
<td>row 1, cell 1</td>
<td>row 1, cell 2</td>
</tr> <tr>
<td>row 2, cell 1</td>
<td>row 2, cell 2</td>
</tr> </table>
</body> </html>
```

4. A database is a collection of information that is organised for easy access, management and updating.
5. Microsoft Access, dBase, Visual FoxPro, IMS and Oracle, MySQL, SQL Server and DB2 are some examples of DBMS.
6. Steps to create a database using template:
 - Click the Sample Templates from Available Templates.
 - Select the database desired by you such as 'Students' from the Available Templates pane.anywhere in the world.
 - Click the Create button.
7. Some features of MS Publisher 2010 are:
 - MS Publisher 2010 has advanced editing tools including the ability to pan, zoom and crop images with pictures placeholder which has the ability to move picture on the page.
 - New object alignment technology by which we can align and position the contents easily.
 - It helps to create dynamic publications in very little time when you insert and

customise prebuilt building blocks of content.

- It gives your text the appearance of expert typesetting with new Open Type typography.
- It provides support for the ligatures, stylistic sets and other professional typography features available in many Open Type fonts.
- It has much better spell check feature for error free publication.

8. Steps to create a publication:

- Choose any type from the most popular task pane. For example, Business Cards.
- Scroll and choose the type of design for the publication from the designs displayed.
- Click the Create button.

Print publication will be created and displayed on the window.

9. Tool Palette is a utility of Adobe Photoshop. It provides users with various tools, which he/she can use while working on images. In

Adobe Photoshop CS6, there are about 70 tools in Tools palette.

10. The syntax to the for loop in Python is:

for variable in sequence: Loop statement

11. Robotics is a branch of computer science that involves the conception, design, manufacture and operation of robots. Artificial intelligence is the brain of robotics. The main aim of the robotics field is to create intelligent machines that can assist humans in a variety of ways.

Robotics is widely used in many fields like banking, gaming and healthcare.

Cyber Olympiad

Choose the correct option.

- | | | |
|---------|---------|---------|
| 1. (a) | 2. (b) | 3. (c) |
| 4. (d) | 5. (b) | 6. (d) |
| 7. (d) | 8. (c) | 9. (c) |
| 10. () | 11. (c) | 12. (a) |
| 13. (a) | 14. (b) | 15. (a) |
| 16. (b) | 17. (c) | 18. (a) |
| 19. (d) | 20. (d) | 21. (a) |
| 22. (b) | 23. (a) | 24. (c) |