

CH-1 NUMBER SYSTEM

Exercise

- A.** 1. 2, 2. Decimal Number, 3. 8, 4. 10, 5. Binary, 6. Hexadecimal, 7. 0
- B.** 1. True, 2. True, 3. True, 4. True, 5. False, 6. False.
- C.** 1. (b), 2. (a), 3. ©, 4. (b), 5. (b)
- D.** 1. A number system is a set of values used to represent different quantities.
 1.) Decimal Number System, 2.) Binary System, 3.) Octal Number System
 4.) Hexadecimal Number System
 5.) Computer Arithmetic
2. Multiply each binary number with its place value, which is in terms of powers of 2, starting from the extreme right digit.
 Increase the power one by one, keeping the base fixed as 2.
 Sum up all products to get the decimal number.
3. The number is borrowed when 1 is subtracted from 0 ($10-1=1$).
4. The octal number system (oct) comprises 8 digits: 0 to 7 with the base 8. The concept of octal number system came from the Native Americans as they used to count numbers by using the space between their fingers instead of using their fingers.
5. This number system comprises 16 digits: 0-9 and the letters A-F, where A-F represents digits 10 to 15 with the base 16. This number system is also known as Hex, where Hex=6 and Decimal = 10, so it is called Hexadecimal.
- E.** 1. Convert any octal number to decimal

number, we have to multiplying the digits of the number from right hand side with the increasing power of 8 beginning form 0.

2. The number is borrowed when 1 is subtracted from 0 ($10-1=1$).

CH-2 CREATING CHARTS IN MS EXCEL

Exercise

- A.** 1. Pie, 2. Bar, 3. legend, 4. X-axis, 5. Ribbon, 6. Design, layout and format tabs.
- B.** 1. True, 2. False, 3. False, 4. False, 5. False, 6. True.
- C.** 1. (b), 2. (a), 3. (c), 4. (b), 5. (a), 6. (b)
- D.** 1. (d), 2. (a), 3. (e), 4. (b), 5. (c)
- E.** 1. X-Axis : It is the horizontal axis of a chart. It is also known as the category axis.
 Y-Axis : It is the vertical axis of a chart. It is also known as the value axis.
2. Chart title : It contains a summary or short description to the chart. It is usually placed at the top of a chart which helps the users to understand what the chart represents.
 Axis title : It is the title given to an axis. A 2D graph has two axes (X, Y) and a 3D graph has 3 axes (X, Y, Z)
3. 2D chart: A 2D graph has two axes (X, Y)
 3D chart: A 3D graph has 3 axes (X, Y, Z).
4. Chart Area : This is the area that makes up the chart. All charts have a chart area. This include the plot area and the space outside it.
 Plot Area : It is the rectangular area bounded by the X-axis define the two sides of a rectangular plot area.
5. Column Chart : These charts are used to compare values across the different

categories. Marks obtained in different subjects by different are shown through column charts.

Line Chart : The line chart is equally effective in displaying trends for multiple series as shown in the figure.

6. Pie chart : A pie chart can only display one series of the data. If we had selected multiple series of data. Excel would ignore all but the first series.

Bar chart : A Bar chart displays comparisons among individual items through a group of bars. It is used to compare multiple values through horizontal and vertical bars.

7. Area Chart : An area chart are like line chart except that the area below the plot line is solid. This chart is mainly used for representing sales and production figures of a company.

XY scatter chart : The purpose of a scatter chart is to observe how the values of two series compares over time or other category. The relationship between two variables is called correlation.

8. Layout tab : on the layout tab you have various options to choose from and select for your chart. You can place pictures, Shapes, Text boxes, labels or Background to your chart.

Format tab : You will find several options to modify the Shape styles, word art styles or size of the chart.

- F. 1. A chart is a graphical representation of data, in which the data is represented by symbols such as bars in a bar chart, lines in a line chart or slices in a pie chart. A chart can represent tabular numeric qualitative structure and provides different information.

2. Types of Charts

1. Column Chart
2. Line Chart
3. Pie Chart
4. Bar Chart
5. Area Chart
6. XY Scatter Chart

3. A pie chart can only display one series of the data. Excel uses the series identified as the identifier as the chart title and displays the values for that series as proportional slices of a pie. Excel would ignore all but the first series.
4. Select the chart. On the layout tab, click on the chart title or the data labels button from the labels group. A drop-down menu displays. Select the appropriate option from the drop-down menu. Change the chart title or the data labels and press the enter key.
5. First, select the chart, click on the select data button from the data group of the design tab of the ribbon. A select data source dialog box displays. Do the desired changes in it.
6. Select the chart, click on the copy button from the clipboard group to select it. Open the MS Word document where you want to copy the chart. Click on the Paste button from the Clip board group of the Home tab. You get the copy of the chart there.
- G. Select the cells that comprises the data you want to use in the chart. Click on the insert tab of the Ribbon to choose the type of chart you want to create from the charts group. A chart of your choice is created. It is based on the data series. On clicking the chart different options are shown in the chart styles group to choose from.

CH-3 WORKING WITH FLASH CS6

Exercise

A. 1. Graphic / Adobe Systems, 2. Library, 3. Stage, 4. Work Area, 5. Time line, 6. Layers.

B. 1. True, 2. False, 3. True, 4. True, 5. True

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

D. 1. Flash is multimedia graphic program developed by Adobe Systems (formerly Macro media). It is used to create animations, games, cartoons, text, graphics and other special effects. It also helps to design movies on the web and create animations with out using programming skills.

2. A gradient is a multicolor fill in which one color gradually turns into another color. Gradients are created by mixing of two or more colors in an objects. You can use the color panel to form your own gradients and add them to the Swatches panel. Two types of Gradients 1) Linear Gradient : If changes color from the starting point to the end point in a straight line. 2) Radial Gradient : If changes color in a circular outward direction, starting from the focal point.

3. It is used to organize and modify the properties of the current selection.

4. Select the File

- ❖ Import – Import to Stage.
- ❖ The Import dialog box displays.
- ❖ Browse and select the file that you want to import and click on Open.

5. Animation includes a series of still images, generally painted or sketched, appeared in rapid sequence. This transition from one image to another is so quick that it seems to show movement.

6. Filters enable you to interesting visual effects to text, buttons and movie clips. Filters generally include effects, such as drop shadows, blurs, glows, and bevels, etc. These effect can be easily applied using the properties panel.

Animated Filtered Text , Flash furnishes a unique feature to animate movie clips that have filters, using motion tweens. You can make an animation that involves light source effect, highlights, bevels and distortions by converting the filter properties at different keyframe ad using motion tween.

E. 1. Press Ctrl+F8. A convert to symbol dialog box is appeared give a suitable name to the symbol and click on the Graphic option. Click Ok button. The symbol is created.

2. Color option to display the color panel.

- ❖ Select either Linear gradient or Radial gradient from the color type drop-down list.

- ❖ Double click on the Left Pointer below the gradient definition bar. The color palette displays. Select the brown color.

- ❖ Double-click on the right pointer and select the color.

- ❖ Select the paint bucket tool and click on the trunk.

- ❖ Adjust the color blends of the gradient by dragging the pointers closer to each other or farther apart.

- ❖ Select any mode like Extend, Reflect or Repeat under the Flow section to apply to the gradient.

- ❖ To add more color to your gradient, click anywhere on the gradient definitions bar to add a slider (pointer). You can then double-

click this slider to set the color.

- ❖ Click on the drop-down arrow on the upper right corner of the color panel bar, and select the Add Swatch from the menu.

CH-4 WORKING WITH LAYERS

Exercise

- A. 1. Transparent, 2. Pencil Icon, 3. 4. View, Grid, Show Grid, 5.
- B. 1. False, 2. True, 3. True, 4. True, 5. False
- C. 1. (a), 2. (c), 3. (c)
- D. 1. Layers are like sheets of transparent paper arranged in a stack. Each layer is a separate thing, but when you have a stack of layers, each with drawings on them, they can create an entire scene.
2. You can hide the layers to see the contents on the other layers. While hiding the layers, you have the option either to hide all the layers in your document at once or hide the layers individually.
- ❖ Click on the icon above the layers. A red cross symbol display Eyes in the Eye column. You will find that all the contents disappear from the stage.
 - ❖ Click on each red cross symbol one by one in the column, and notice that the contents on the layer on the stage.
3. Click on the layer that to be renamed.
- ❖ Double click on the layer name and type the new name.
4. The concept of Masking in Flash CS6 involves using a shapes to hide or reveal portions of a piece of artwork. It is like view the outside through a small window in your house. The window's size limits what you can see when you are inside. Masking is generally used in

Flash to create spotlight effect that would display the text or object through a hoke.

- E. 1. You can lock the layer to avoid any further changes to the content added by you.

CH-5 INTRODUCTION TO HTML 5

Exercise

- A. 1. 1. Network, 2. Two, 3. Six, 4. Container, 5. Cascading.
- B. 1. True, 2. True, 3. False, 4. True, 5 False.
- C. 1. (c), 2. (a), 3. (b), 4. (a), 5. (c), 6. (b).
- D. 1. HTML stands for Hypertext Mark-up language. It is a complete code package that enables the user to create web pages that comprise both text and graphics. It is simple mark-up language that expresses the structure and behaviors of the web document. All the web browsers are created to understand and interpret this language.
2. **Container Elements**
- The elements that consist of both ON and OFF tags are called Container Elements.
- E.g., This makes the text bold
- Empty Elements**
- Empty elements include only ON tags. They do not have OFF tags. These elements do not enclose any data; instead they do some function on their own.
- E.g.,
tag (It breaks the line and displays the text from the next line.)
3. To create a web page in HTML, follow the steps given below.
- ❖ Open Notepad by clicking on Start > All apps > Windows Accessories > Notepad.

- ❖ The Notepad window will display.
 - ❖ Type the HTML code as shown in the figure.
 - ❖ Click on the File > Save option. The Save As dialog box will display. Select the target folder to save the file and mention the name in File name text box with an extension .html.
 - ❖ Click on the Save button to save your web page.
4. A markup language is a computer language that uses tags to define elements within a document. It is human-readable, meaning marking files contain standard words, rather than typical programming syntax.

Originally, HTML was designed with the intent of defining the structure of documents to simplify the sharing of scientific information between researchers. Now, it is being widely used to format web pages with the help of different tags.

5. Cascading style sheets are used to format the layout of web pages. They can be used to define text styles table sizes, and other aspecting web pages that previously could only be defined in a page's HTML.

The concrete benefits of CSS include:

- ❖ Control layout of many documents from one single style sheet. (External Style Sheet).
- ❖ More precise control of layout.
- ❖ Apply different layout to different media types (screen, print, etc.)
- ❖ More advanced options and sophisticated techniques.

- E. 1. This property is used to add an image in the background of an HTML

document.

SYNTAX: background-image:value

where value = url (path of the image)

```
<html>
```

```
<head>
```

```
<style type="text/css">
```

```
body {background-mage:url ("c:/Users/User/Desktop/Html/Temwork.png")}
```

```
</style>
```

2. This property enables us in inserting the picture or image at a desired place on the HTML document. By default, a image is inserted at the top-left corner of the element.

SYNTAX: background where value=xpos

ypos|x%y%[[top|center|bottom]][[left|center|right]].

CH-6 INTRODUCTION TO QBASIC

Exercise

- A. 1. Program, 2. IDE, 3. Statements, 4. 7.1, 5. F5, 6. bar, 7. Mode, 8. Loading, 9. Pixel 10. Sound.
- B. 1. False, 2. True, 3. True, 4. True, 5. True, 6. False, 7. True, 8. True, 9. True, 10. False.
- C. 1. (b), 2. (a), 3. (b), 4. (a)
- D. 1. E= Upper – Right H= Upper – Left
 G= Lower – Left F= Lower – Right
 R= Right L= Left
 D= Down U= Up
- E. 1. **Writing Program** -Every program in QBASIC contains statements. Follow the steps given below to write a program in QBASIC.
- ❖ Click on the File menu.
 - ❖ Select New Program option.
 - ❖ Write the program.
- SCREEN 2

LINE (500, 50)-(100, 100

Running Program -To run a program in QBASIC follow the steps given below.

- ❖ Click on Run Menu.
 - ❖ Select Start option or type Run in the Immediate mode of the window.
2. The different steps to save a program in QBASIC are given below.
- ❖ Click on the File menu and Select Save or Save As option. A Save As dialog box emerges on the window.
 - ❖ Type the file name and click on OK in the dialog box.

Your program is saved with the .BAS extension. Any file generated in QBASIC is automatically given an extension .BAS. This makes it easy to identify files generated in BASIC.

3. While naming a file follow the rules given below.
- ❖ The file name should not have more than 8 characters.
 - ❖ It should start with an alphabet.
 - ❖ There should be no space in the name.
 - ❖ There should be no special characters in the name.

4. Syntax : PAINT (X, Y), Fill Color, Border Color

X, Y – The coordinates that show the location of the shape.

Fill Colour - This is for the colour to be filled inside the figure. A particular colour is denoted through a number.

Border Colour - This is for the colour of the border of the figure. It is also denoted through a number.

5. The lowest frequency allowed by QBASIC is 3,7 HZ. The highest frequency is 32,737 HZ, but this sound

cannot be heard because the normal human hearing range ends at 20,000 HZ.

- F. DRAW is same as the turtle in the programming language MSW Logo. With DRAW, you can move around the screen and draw lines along the way. Here are the directional commands given below.

U = Up

D = Down

L = Left

R = Right

E = Upper-right

F = Lower-right

G = Lower-left

H = Upper-left

To drag a cursor without drawing the line, use the alphabet B before the command.

After each directional command, the length of the line (pixels) should be denoted. If no length is defined then the value is supposed to be 1.

CH-7 WORKING WITH WEB

BROWSERS

Exercise

- A. 1. software, 2. Cache, 3. Search, 4. Plug-ins, 5. Image.

- B. 1. False, 2. True, 3. True, 4. False, 5. True.

- C. 1. (a), 2. (b), 3. (a), 4. (c), 5. (c), 6. (c).

- D. 1. **Graphical Web Browser** : Graphical browser like Internet Explorer, Mozilla Firefox, Netscape, Opera and Google Chrome can display text, images, audio and video files. They are accessible for operating systems such as Windows, Apple and Linux. You can even download and install a graphical browser on your computer.

Text Web Browser: A text web browser like a graphical browser, Lets you surf

the web. However, there is one big difference the complete absence of a nice Looking interface. You hardly ever use the mouse to more about but rather employ keys like the tab and the enter key. opening a web site shows you only text.

2. **Links :** A link is an HTML object that allows you to jump to a new location when you click or tap it. links are found on almost every web page and provide a simple means of navigating between pages on the web. It can be text or an image. Sometimes you are not sure if it is a link or not. Place the cursor over it if it turns to a hand symbol then it is a link.

Bookmarks : Bookmarks is an Internet browser feature that allows a user to go back to a previously visited website by clicking on the saved link- without retyping the site's address. It is also called favorites. In Internet Explorer, you can add a bookmark by clicking Favorites and then Add to Favorites. You can also click on Bookmarks and select Save this page option to save the web page. Other browsers are similar, but they may use different names for book marking.

3. **Hyperlinks :** A hyperlink is an element in an HTML document that links to either another portion of the document or to another document altogether. On webpages, hyperlinks are usually colored purple or blue and are sometimes underlined.

Plug-ins : Plug-ins applications are program that can easily be installed and used as part of your web browser. Examples of plug-ins include QuickTime Player and Flash player.

Your browser may have come with some plug-ins already installed. Once you have the necessary plug-ins, you will be able to enjoy watching videos and playing games on web sites.

4. **Internet Explorer:** Internet Explorer is a web browser that allows computer users to view web pages on the Internet users can also use Internet Explorer to listen and watch streaming content, access online banking, make purchases over the Internet and much more. Internet Explorer was first introduced in August 16, 1995 by Microsoft as Internet Explorer 1.0. So far 11 versions of Internet Explorer were released. Internet Explorer 11. Which was released in 2013, is the last version of the web browser.

Google Chrome: Google Chrome is yet another popular web browser that was developed by Google. It was released on December 11, 2008. It allows the users to quickly access web pages and make local desktop shortcuts to open the web application in the browser. Google Chrome is extensively used by the users due to its stability and simplicity.

- E. 1. A web browser or frequently called as browser is an application software that is installed on a computer to provide access to the World Wide Web. It brings the Web pages from the servers along with the necessary files such as images, Hashes, videos etc. interprets them and then displays it on the serves. Example: internet explorer, chrome, safari etc.
2. Some popular web browsers are Internet Explorer, Mozilla Firefox, Google Chrome, Safari and Opera.

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3. There are mainly two types of browsers- Graphical and Text.

Graphical Web Browser : Graphical browser like Internet Explorer, Mozilla Firefox, Netscape, Opera and Google Chrome can display text, images, audio and video files. They are accessible for operating systems such as Windows, Apple and Linux. You can even download and install a graphical browser on your computer.

Text Web Browser: A text web browser like a graphical browser, Lets you surf the web. However, there is one big difference the complete absence of a nice Looking interface. You hardly ever use the mouse to more about but rather employ keys like the tab and the enter

key. opening a web site shows you only text. In Short 'A text web browser displays only the text on a web sites with any links. It cannot display any images, video or flash animations. Gopher is the popular text web browser.

4. A search engine is a software program available through the Internet that helps you to search specific information. Today there are thousands of different search engines available on the Internet each with their own abilities. These search engines are software on the web that help you to search specific information. The result that you get is a list of links that match with the keywords Search engines vary in the way they find and list the content on the web.

Today the most popular and well-known search engine is Google. Other popular search engines include Ask.com, Yahoo, Rediff, AOL, and Baidu.

5. Bookmarks is an Internet browser feature that allows a user to go back to a previously visited website by clicking on the saved link- without retyping the site's address. It is also called favorites. In Internet Explorer, you can add a bookmark by clicking Favorites and then Add to Favorites. You can also click on Bookmarks and select Save this page option to save the web page. Other browsers are similar, but they may use different names for book marking.

- F. 1. We should not click on the irrelevant links or advertisements on a web page while browsing. Given below the harmful effects of irrelevant links:

- ❖ Hacking your website.
 - ❖ Building hundreds or thousands of spammy links to your website.
 - ❖ Copying your content and distributing it all over the internet.
 - ❖ Pointing vulgar links to your website.
 - ❖ Creating fake social profiles and ruining your reputation online.
2. When you use the and buttons your browser may use its web Back Forward cache to display the page. The web cache stores lately viewed web pages so that they do not need to be downloaded again. You can use the Refresh button (sometimes called Reload) to tell the browser to load the page again.

CH-8 INTRODUCTION TO E-MAIL

Exercise

- A. 1. Server, 2. G mail and Yahoo, 3. E-mail, 4. Bcc, 5. Domain.
- B. 1. True, 2. False, 3. True, 4. True, 5. True, 6. True, 7. True.
- C. 1. (a), 2. (b), 3. (c), 4. (b), 5. (b), 6. (a).
- D. 1. Email or electronic mail is a way to send or respective messages through the Internet. E-mail is very fast, usually taking only a few seconds to reach its destination.
2. ❖ Click on the Attach option in the New Message box. An Insert Attachment dialog box appears.
- ❖ Find and select the files you want to attach, and then click on Attach. Perform this step for each file you want to add.
 - ❖ The attached file information display in the New Message box.
 - ❖ Click on the Send button after typing the e-mail address of the sent message is started in the Sent folder.
3. On successfully logging into an email account, several options such as Inbox, Drafts, Compose and Sent Mail are visible on the screen.
4. Netiquette or net etiquette refers to etiquette on the Internet. Good netiquette involves respecting other privacy and doing anything online that will annoy or frustrate other people.
5. Some of the websites that provide free e-mail accounts are www.gmail.com, www.yahoo.com and www.hotmail.com
- ❖ Connect to the internet by double-clicking the internet explorer or the google chrome.
 - ❖ Type gmail.com in the address bar and go to Gmail site.
 - ❖ Click on the link Create an account present at the bottom.
 - ❖ A form will appear on the screen. Fill in the information that has been asked for like your name, date of birth, e-mails address you prefer or password. Be very careful while your password. Memorize it and keep changing the password periodically to maintain the security of password.
 - ❖ There is a section in the form that includes security questions which makes it possible for you to retrieve the password in case you forget it. The question that you choose to answer in the form is asked by Google to verify your identify.
 - ❖ In the next section of the form, you have to type the code in the box to security reasons.
 - ❖ Finally you have to agree to the Terms of Service. After reading the

text properly click on I Agree.

- ❖ After filling the form and agreeing to the terms and conditions, your e-mail account is created and you receive a new e-mail address and a password.

6. A blog is also known as weblog. It is a personal online diary or for can say journal which allows you to share thoughts are ideas. You can add video, games, pictures music. You can do all there things without the need of any programming knowledge.

- ❖ Blogging is the act of posting content on a blog or posting comments on someone else's blog.

- ❖ Blogging is very popular today because it allows people to interact with each other. Blogging has also become a popular search engine optimization tool because search engines like Google and Yahoo know that a blog is frequently updated with content in visitor comments.

- ❖ Sometimes blogging can also be used as actual media that spreads news. There has been more than one occasion where a major newspaper decided to run only a small article about something that lots of people would consider big news.

- ❖ There are many different types of blogs like personal blogs, corporate and organizational blogs are interactive, allowing visitors to leave comments to a bloggers postings.

F. 1. Spam filters can help, but they are not error-free. If you are receiving lots of

spam from the same source, complain to your Internet service provider.

2. No, it consequences very bad.

CH-9 COMPUTER VIRUSES

Exercise

A. 1. Antivirus, 2. Virus, 3. Trojans, 4. Worm, 5. Hardware.

B. 1. False, 2. False, 3. False, 4. True, 5. False, 6. True, 7. True, 8. False.

C. 1. (b), 2. (a), 3. (b), 4. (b), 5. (a), 6. (c), 7. (a).

D. 1. Technically, a computer virus is a type of ill-natured code or program written to after the way a computer operators and that is designed to spread from one computer to another. A virus operates by inserting or attaching itself to a valid program or a document that supports macros on order to carry out its code. In the process a virus has the potential to cause damaging effects. Such as harming the system software by corrupting or destroying data.

2. A computer virus carries out the following actions.

- ❖ It can infect the executable program files like Microsoft Word and operating system programs.

- ❖ It can infect the file before it is attached to an e-mail message or transferred to a disk.

Thus, the virus spreads from one computer to another.

3. Computer viruses generally spread in one of the three ways:

- ❖ From removable media,
- ❖ From files downloaded from the Internet and
- ❖ From e-mail attachments.

4. Antivirus software is an application

software developed to detect and remove the virus from the computer system. Whenever the computer system is started antivirus starts automatically. It detects the virus in all the directories and files of computer system. When the virus is detected, it removes that virus. Some popular antivirus software are given below.

- ❖ Norton AVG † Avast † McAfee † Symantec
 - ❖ Kaspersky (It is well-known for its high detection rate.) † SmartDog
5. Most viruses are developed to avoid detection by the computer user. But there are a few signs that denote the existence of a virus in our computer.
- ❖ The computer starts to operate slower than normal.
 - ❖ The computer does not respond to our instruction and shuts down frequently.
 - ❖ The computer generally restarts on its own.
 - ❖ Applications we store in the computer do not work as usual.
 - ❖ Some or the whole part of disk drives becomes difficult to access.
 - ❖ Strange error messages might display on the screen.
 - ❖ A virus-infected file will have double extensions like image.jpg.vbs or image.jpg.exe.
 - ❖ Strange icons emerge on our desktop that are not associated with to any program.
6. To prevent viruses from entering our computer, we must update information about existing viruses in the antivirus program. We should careful while browsing the internet, downloading

files or open an email attachment. By doing these things, we can keep our computer free from harmful virus programs. Some preventive measures are given.

- ❖ Obstruct access of viruses to your system both offline and online.
- ❖ Allow only authentic users to use your system.
- ❖ Keep programs and data on separate disks, if possible.
- ❖ Scan all the pen drives and CDs with the antivirus software before using them.
- ❖ Make sure that the latest version of an antivirus software is installed in your computer.

- E. 1. It can enter the computer through an infected floppy, CD, pen drive or the internet. It can attach itself to an item in the computer system.

Most viruses stay active in the computer memory until for turn off the computer.

Scan all the pen drives and CDs with the antivirus software before using them.

CH-10 CYBER THREATS & SECURITY

Exercise

- A. 1. Spoof, 2. Cyber Bullying, 3. Pharming, 4. Hacking, 5. Biometrics.
- B. 1. False, 2. True, 3. True, 4. True, 5. True, 6. True, 7. False, 8. False, 9. False.
- C. 1. (c), 2. (b), 3. (b), 4. (a), 5.
- D. 1. Computer and Internet have become an integral parts of our life. The fast growing technologies of the modern age have made our life much easier and more connected around the globe through interconnected networks.

Today we are connected to the Internet through computer, smart phone or tablet. These devices are used for storing personal information, online banking, online shopping, bookings tickets, playing games, and connecting with friends over social media.

Although networks of today have made the communication process very easy and have provided great opportunities in almost all spheres, yet there are various kinds of challenges and threats related to the use of these networks of today. These threats are called Cybercrimes.

2. A Cyber crime is any unlawful activity done through Internet such as identity theft; where somebody can steal your e-mail Id or password and use it to send fake emails to people comprising false information about the product or winning a lottery etc.

Then there are credit card account thefts, Internet frauds such as purchasing goods in your name, fishing out mobile phone contacts etc., forgery i.e., parrotting documents, currency and objects of other people with bad purposes harassing others and mischief mongering, by sending threatening messages, all of which come under the jurisdiction of Indian Penal Code (IPC).

Cybercrimes can be divided into three main groups.

- ❖ Crime against an Individual person
- ❖ Crime against property
- ❖ Crime against an organization/society

3. CYBER STALKING

In cyber stalking the person can:

- ❖ Harass and humiliate the victim by posting false information about him.
- ❖ Monitor or view a victim's online activities.
- ❖ Damage the victim's computer by sending viruses.
- ❖ Threaten the victim or his family.
- ❖ Order humiliating items or subscribe cheap magazines and deliver these at victim's house or workplace.

CYBERBULLYING

It is an act of harming or harassing through information technology in an intentional manner. This involves insulting remarks and threatening messages sent by e-mails spreading rumors about the person either by e-mails or social networking sites, posting shameful photos and videos to hurt the person, offensive remarks against gender, race, religion, or nationality.

4. Phishing is a form of Fraud in which an attacker masquerades as a reputable entity or person in email or other communication channels. The user is asked to visit a website in which he is asked to update or validate his personal details, like user name, password, credit card details, etc. In this way the operators of the fake websites perpetrate crimes in your name after stealing your identity.
5. Procuring or stealing someone's personal information is called Identity theft. It is a major issue for people who use Internet for online shopping, cash transactions, and banking services. The stolen information generally includes a person's name, date of birth, account number, credit/debit card

number, ATM pin, etc. This information is then misused to acquire genuine documents, new credit cards to make purchase, withdraw money, get passports and driving licences in the victims name. Hackers steal the information either through hacking the network that a person is connected to or placing a software unknowingly on a person's computer.

6. A password is a sequence of characters, such as letters, numbers and symbols used as secret key for accessing a computer system or network. It guarantees that the system is accessed only by the authorized users. To protect data and important information, strong passwords should be used.
7. In computer terminology, backup refers to the process of making copies of data or data files to use in the event the original data files are lost or destroyed. These additional copies are called backups. Backups can also be used to restore the files that have been deleted accidentally or corrupted by the virus.
8. Firewall is a security system that protects your computer by preventing unauthorized users from acquiring access to it through network or internet. It can either be hardware or software or a combination of both. It is enacted on the gateway of a network and follows a particular set of rules defined by the user or the network administrator. Based on these rules, it checks the incoming and outgoing network traffic.

E. 1. ENCRYPTION SOFTWARE

While transferring data over networks, we may lose data privacy.

We can protect our data from unauthorized access by using the technique called Encryption.

Encryption is the process of converting information or data into a code, especially to prevent unauthorized access. Encryption software is used to create the encrypted text called 'Cipher text'. To read an encrypted message, it has to be decrypted with the same software on the receiver's side. This process is called Decryption. The software applications, like GnuPg can be applied to encrypt data files and E-mails.

2. CYBER BULLYING

It is an act of harming or harassing through information technology in an intentional manner. This involves insulting remarks and threatening messages sent by e-mails spreading rumors about the person either by e-mails or social networking sites, posting shameful photos and videos to hurt the person, offensive remarks against gender, race, religion, or nationality.

MODEL TEST PAPER-1

- A. 1. (c), 2. (c), 3. (a), 4. (b), 5. (b)
- B. 1. Hexadecimal, 2. 0, 3. Design, Layout and Format tabs, 4. Timeline, 5. Layers
- C. 1. True, 2. True, 3. False, 4. True, 5. True
- D. 1. The number is borrowed when 1 is subtracted from 0 ($10-1=1$).
2. 2D chart : A 2D graph has two axes (X, Y)
3D chart : A 3D graph has 3 axes (X, Y, Z).
3. Select the File
❖ Import – Import to Stage.

- ❖ The Import dialog box displays.
 - ❖ Browse and select the file that you want to import and click on Open.
4. X-Axis : It is the horizontal axis of a chart. It is also known as the category axis.
- Y-Axis : It is the vertical axis of a chart. It is also known as the category axis.
5. It is used to organise and modify the properties of the current selection.
5. 1. Machine Language: a computer programming language consisting of binary or hexadecimal instructions which a computer can respond to directly.
2. MS Excel Bar: The menu bar is the part of a browser or application window, typically at the top left side, that houses drop-down menus that allow the user to interact with the content or application in various ways. In Microsoft Word, for example, the "File" menu provides options to open a file, create a new one, and save or print -- among others. The "Edit" menu allows the user to perform such functions as copying and pasting, finding and replacing text.
3. Gradient: A gradient is multicolor fill in which one colour gradually turns in another colour. Gradients are created by mixing of two or more colours in an object. You can use the colour panel to form your own gradients and add to form your own Swatches panel.
4. Rotation Handle: You can move the rotation handle clockwise or anticlockwise to rotate the gradient as needed.
5. Symbols: A Symbol is a name for any object created by the user and is stored in the library. It can be used to add to a

movie or animation when required. Symbols can be graphics buttons or movie chips. These are very useful elements.

Model Test Paper-2

- A. 1. (b), 2. (b), 3. (a), 4. (c), 5. (c)
- B. 1. View, Grid, Show Grid 2. Two, 3. Sound, 4. Transparent, 5. Cascading
- C. 1. False, 2. True, 3. True, 4. True, 5. False
- D. 1. You can hide the layers to see the contents on the other layers. While hiding the layers, you have the option either to hide all the layers in your document at once or hide the layers individually.

- ❖ Click on the icon above the layers. A red cross symbol displays Eyes in the Eye column. You will find that all the contents disappear from the stage.

- ❖ Click on each red cross symbol one by one in the column, and notice that the contents on the layer on the stage.

2. . **Writing Program** -Every program in QBASIC contains statements. Follow the steps given below to write a program in QBASIC.

- ❖ Click on the File menu.
- ❖ Select New Program option.
- ❖ Write the program.

SCREEN 2

LINE (500, 50)-(100, 100

- **Running Program** -To run a program in QBASIC follow the steps given below.

- ❖ Click on Run Menu.
- ❖ Select Start option or type Run in the Immediate mode of the window.

3. Container Elements

The elements that consist of both ON and OFF tags are called Container Elements.

E.g., This makes the text bold

Empty Elements

Empty elements include only ON tags. They do not have OFF tags. These elements do not enclose any data; instead they do some function on their own.

E.g.,
tag (It breaks the line and displays the text from the next line.)

4. Writing Program -Every program in QBASIC contains statements. Follow the steps given below to write a program in QBASIC.

- ❖ Click on the File menu.
- ❖ Select New Program option.
- ❖ Write the program.

SCREEN 2

LINE (500, 50)-(100, 100

Running Program -To run a program in QBASIC follow the steps given below.

- ❖ Click on Run Menu.
- ❖ Select Start option or type Run in the Immediate mode of the window.

5. The concept of masking in Flash CS6 involves using a shapes to hide or reveal portions of a piece of art work. It is like view the outside through a small window in your house. The window's size limits what you can see when you are inside. Masking is generally used in Flash to create spotlight effect that would display the text or object through a hoke.

E. 1. Attribute: In HTML an attribute is a characteristic of page elements, such as

font size or color. All attributes contain two parts a name and a value. The 'name' is the characteristic that you want to set and the 'value' is what you want for the specific characteristic.

2. Markup Language: A markup language is a computer language that uses tags to define elements within a document. It is human-readable, meaning marking files contain standard words, rather than typical programming syntax.
3. QBASIC: QBASIC is one of the versions of BASIC. It refers to Quick Beginners All purposes Symbolic Instruction Code.
4. Link Break Element: Link break element separates the line and shows the text on a new line. It is like an Enter key on a keyboard which takes the cursor on the next line towards the left margin on the screen. Line breaks are good for ending lines after short pieces of information such as address.
5. Masking In Flash : The concept of masking in Flash CS6 involves using a shapes to hide or reveal portions of a piece of art work. It is like view the outside through a small window in your house. The window's size limits what you can see when you are inside. Masking is generally used in Flash to create spotlight effect that would display the text or object through a hoke.

Model Test Paper-3

- A. 1. (a), 2. (a), 3. (c), 4. (a), 5. (a)
- B. 1. Search, 2. Server, 3. Worm, 4. Hacking, 5. Biometrics
- C. 1. True, 2. True, 3. True, 4. True, 5. True
- D. 1. **Graphical Web Browser** : Graphical browser like Internet Explorer, Mozilla

Firefox, Netscape, Opera and Google Chrome can display text, images, audio and video files. They are accessible for operating systems such as Windows, Apple and Linux. You can even download and install a graphical browser on your computer.

Text Web Browser: A text web browser like a graphical browser, Lets you surf the web. However, there is one big difference the complete absence of a nice Looking interface. You hardly ever use the mouse to more about but rather employ keys like the tab and the enter key. opening a web site shows you only text.

2. ❖ Click on the Attach option in the New Message box. An Insert Attachment dialog box appears.
 - ❖ Find and select the files your want to attach, and then click on Attach. Perform this step for each file you want to add.
 - ❖ The attached file information display in the New Message box.
 - ❖ Click on the Send button after typing the e-mail address of the sent message is started in the Sent folder.
3. Netiquette or net etiquette refers to etiquette on the Internet. Good netiquette involves respecting other privacy and doing anything online that will annoy or frustrate other people.
4. In computer terminology, backup refers to the process of making copies of data or data files to use in the event the original data files are lost or destroyed. These additional copies are called backups. Backups can also be used to restore the files that have been deleted accidentally or corrupted by the virus.

5. Computer viruses generally spread in one of the three ways:

- ❖ From removable media,
- ❖ From files downloaded from the Internet and
- ❖ From e-mail attachments.

- E. 1. Domain: A group of computers and devices on a network that are administered as a unit with common rules and procedures. Within the Internet, domains are defined by the IP address. All devices sharing a common part of the IP address are said to be in the same domain.
2. Viruses: Technically, a computer virus is a type of ill-natured code or program written to after the way a computer operators and that is designed to spread from one computer to another.
3. Links: A link is an HTML object that allows you to jump to a new location when you click or trap it. Links are found on almost every webpage and provide on the web. It can be text or an image.
4. Navigation Buttons: Sometimes, when you click on a link, you may need go back to the previous page. It can be done by using browser's Back button. Once you have pressed the Back button, you can press the Forward button to the follow the link again.
5. Website: A set of interconnected webpages, usually including a homepage, generally located on the same server, and prepared and maintained as a collection of information by a person, group, or organization.

