# iT MATRIX

## Teacher's Learning Materials

# 0–8

# Computer–0

## 1. Know About Computer

*Let's Do Something*

**A. 1.** (a), **2.** (c), **3.** (a)

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T)

*Activity Time*

Mouse, Keyboard, CPU, Monitor

## 2. Uses of Computer

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** Schools, Banks, Hospitals, Airports

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T)

*Activity Time*

Hospital , Bank , School

## 3. Hardware and Software

*Let's Do Something*

**A. 1.** (a), **2.** (b), **3.** (c)

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T), **5.** (T)

*Activity Time*

**Hardware**—Mouse, Keyboard, Car

**Software**—Songs, Driving Rules, Windows

## 4. Keyboard and Mouse

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (c), **4.** (c)

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (F)

*Activity Time*

Do yourself.

## 5. Windows and Internet

*Let's Do Something*

**A. 1.** (a), **2.** (c), **3.** (c), **4.** (c)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** Desktop, **2.** left, **3.** computers, **4.** Internet Explorer

*Activity Time*

My Document , My Computer , Internet Explorer , Recycle Bin

# Computer–1

## 1. Computer...A Machine

*Let's Do Something*

**A.** used to take us from one place to another place, Used to draw pictures, Used to get cool air, used to watch movies, used to keep vegetables fresh.

**B. 1.** man-made, **2.** life, **3.** electricity, **4.** pictures

**C. 1.** FAST, **2.** TIRED, **3.** SUMS, **4.** MISTAKES, **5.** TIME

**D. 1.** Machine is a man-made thing which is made to save our time and to make our work easy.

   **2.** Computer is a machine which runs on electricity.

   **3.** Computer helps us to do many useful tasks.

   **4. (a)** Cooler, **(b)** Mobile, **(c)** Refrigerator, **(d)** Air-conditioner.

*Activity Time*

**(a)** MACHINE, **(b)** COMPUTER, **(c)** NATURAL, **(d)** FAST, **(e)** PICTURE

## 2. Uses of Computer

*Let's Do Something*

**A. 1.** (b), **2.** (c), **3.** (a), **4.** (b)

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T)

**C. 1.** In hospitals, computer help doctors to find out diseases and in operations.

   **2.** In schools, computers are used to educate the children.

   **3.** Bank, School, Railway Station, Shop

*Activity Time*

**A.** Do yourself.

**B.** BANK, SCHOOL, COMPUTER, HOSPITAL, HOMES

## 3. Parts of a Computer

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (c), **4.** (b)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F)

**C. 1.** A computer mouse looks like a real mouse. It has two or three buttons.

   **2.** A printer prints results on paper.

**3.** CPU stands for Central Processing Unit.

**4.** Monitor, Keyboard, CPU, Mouse

*Activity Time*

Do yourself.

# 4. Knowing Keyboard

*Let's Do Something*

**A.** **1.** (c), **2.** (a), **3.** (c), **4.** (b)

**B.** **1.** (T), **2.** (F), **3.** (T), **4.** (F)

**C.** Do yourself.

**D.** **1.** A keyboard has five types of keys.

**2.** Keyboard is an input device which is used to type words and numbers on a computer.

**3.** **(a)** Arrow Keys, **(b)** Number Keys, **(c)** Alphabetic Keys, **(d)** Function Keys.

**4.** Alphabetic keys are used to write sentences.

*Activity Time*

Do yourself.

# 5. Using a Mouse

*Let's Do Something*

**A.** **1.** (c), **2.** (b), **3.** (b), **4.** (a)

**B.** **1.** (F), **2.** (F), **3.** (T), **4.** (T)

**C.** **1.** Computer mouse is a pointing device which is used to select and draw.

**2.** Mouse pointer is an arrow on the screen.

*Activity Time*

Do yourself.

# 6. Operating the Computer

*Let's Do Something*

**A.** **1.** (c), **2.** (b), **3.** (b)

**B.** **1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**C.** **1.** **Step 1 :** Switch on the main switch for power supply.

**Step 2 :** Now, switch on the power button of the UPS.

**Step 3 :** Switch on the power button of the monitor.

**Step 4 :** Finally switch on the CPU.

**2.** **Step 1 :** Click on the Start button on the screen. A list of option will appear.

**Step 2 :** From the menu that appears, select option Shut down. Now wait for some time till the computer turns off automatically.

**Step 3 :** Switch off the power button of the monitor.

**Step 4 :** Now, switch off the power button of the UPS.

**Step 5 :** Finally, switch off the main power supply.

*Activity Time*

Do yourself.

# 7. Introduction to Paint

*Let's Do Something*

**A.** **1.** (c), **2.** (a), **3.** (b), **4.** (a)

**B.** **1.** (T), **2.** (T), **3.** (F), **4.** (F)

**C.** **1.** Paint

**2.** You can open the Paint program by following steps:

**Step 1 :** Click on the Start button.

**Step 2 :** Choose All Programs.

**Step 3 :** Choose Accessories and click on Paint.

**3.** Pencil tool is used to draw freehand drawing.

*Activity Time*

**1.** Fill with color tool, **2.** Rectangle tool, **3.** Pencil tool, **4.** Line tool, **5.** Eraser tool.

# 8. Storage Devices

*Let's Do Something*

**A.** **1.** (b), **2.** (a), **3.** (b), **4.** (c)

**B.** **1.** (T), **2.** (F), **3.** (T), **4.** (F), **5.** (T)

**C.** **1.** Floppy disk is a magnetic disk. It is used for storing small quantity of information.

**2.** The shape of CD is round.

**3.** Hard disk is a storage device. It is fitted inside the CPU box.

**4.** Pen drive is the latest storage device.

**5.** Hard disk is fitted inside the CPU box.

*Activity Time*

 Floppy Disk,  Pen Drive,

 Compact Disk,  Hard Disk

## 9. Computer Lab Manners

*Let's Do Something*

**A. 1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**B. 1. (a)** We should always keep the computer-room neat and clean. **(b)** We should follow the proper steps to switch ON the computer.

**2.** We should not eat or drink in the computer lab.

**3.** Because the dust of the shoes is harmful for computers.

**4.** When we cover computer, we protect it from dust.

*Activity Time*

Do yourself.

# Computer–2

## 1. Computer and Its Types

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (c), **4.** (b)

**B.**  Desktop Computer,  Laptop Computer,  Palmtop Computer

**C. 1.** (F), **2.** (T), **3.** (F), **4.** (T)

**D. 1.** Computer is an electronic machine which can perform many tasks quickly, easily and accurately.

**2.** A laptop computer is a kind of PC that can be used easily by carrying it from one place to another.

**3. (a)** Computer never gets tired or bored. **(b)** Computer's storage capacity is very large. **(c)** Computer can do a number of jobs at the same time.

**4.** Desktop computer has more capacity.

*Activity Time*

**A. 1.** DESKTOP, **2.** COMPUTER, **3.** PALMTOP, **4.** LIMITATIONS

**B.** Do yourself.

## 2. Parts of A Computer

*Let's Do Something*

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

**B. 1.** (F), **2.** (T), **3.** (F), **4.** (T), 5. (F)

**C. 1.** Monitor looks like a TV. This device displays results on the screen.

**2.** Monitor, CPU, Keyboard, Mouse.

**3.** Microphone is used to record your voice, music and sound in the computer.

*Activity Time*

**A. 1.** Mouse, **2.** Monitor, **3.** CPU, **4.** UPS, **5.** Keyboard

**B.** Do yourself.

**C.** Do yourself.

## 3. How a Computer Works

*Let's Do Something*

**A. 1.** (c), **2.** (b), **3.** (a), **4.** (b)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (T)

**C. 1.** The calculations and making decisions are called processing.

**2.** Output devices display the results on computer screen.

**3.** Because all the processing and calculation in computer is done by CPU.

**4.** Input devices are used to feed data and instructions in computer.

*Activity Time*

**A.** Do yourself.

**B. 1.** Input, **2.** Output, **3.** Process, **4.** Process, **5.** Output

## 4. Keyboard and Its Functions

*Let's Do Something*

**A. 1.** (b), **2.** (c), **3.** (a), **4.** (b)

**B.** Do yourself.

**C. 1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**D. 1.** Alphabetic keys are used to write a word or a sentence on computer screen.

**2.** Backspace key is used to erase anything typed on the left of the cursor.

**3.** Spacebar key is used to give blank space between the words.

**4.** Four cursor control keys are there on a keyboard.

*Activity Time*

**A.** Do yourself.

**B. 1.** Caps Lock key,

**2.** Spacebar key,

**3.** Backspace key,

**4.** Enter key.

## 5. Using Mouse

*Let's Do Something*

**A. 1.** (a), **2.** (b), **3.** (c), **4.** (c)

**B. 1.** (F), **2.** (F), **3.** (T), **4.** (T), **5.** (T)

**C. 1.** Pointing device is used to select anything on the monitor screen. Mouse is a pointing device.

**2.** To click, place the pointer on any icon, press the left mouse button once and release it. It will select an icon. This is known as clicking.

**3.** Press left mouse button on the icon. Keeping it pressed, move the mouse on the pad. This process is known as dragging.

*Activity Time*

Do yourself.

## 6. Let's Paint

*Let's Do Something*

**A. 1.** (c), **2.** (a), **3.** (a), **4.** (b)

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (F)

**C. 1.** Pencil tool is used to draw freehand drawing.

**2.** Line tool is used to draw straight lines in Paint.

**3.** Fill with color tool is used to colour drawings.

*Activity Time*

**A. (a)** BRUSH, **(b)** PENCIL, **(c)** TEXT, **(d)** TOOL BOX, **(e)** RECTANGLE

**B.** Do yourself.

## 7. Microsoft Windows 2007

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (T)

**C. 1.** Operating System is a software program that provides an interface between user and the computer softwares.

**2.** In Windows operating system we can perform many functions like solving sums, playing movies, reading books, etc.

**3.** Desktop, icons, taskbar, start button, recycle bin and my documents are some components of Windows. 4. My documents is the personal folder for storing data so it is useful for us.

*Activity Time*

Do yourself.

## 8. Save, Open, Print & Set as Wallpaper

*Let's Do Something*

**A. 1.** (b), **2.** (c), **3.** (a), **4.** (a)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (F)

**C. 1.** To save a file in Windows, follow these steps :

**Step 1 :** Click on Office Button drop-down menu. Many options will be displayed.

**Step 2 :** Click on Save button.

**Step 3 :** Save As window will appear on the screen.

**Step 4 :** Type the name of the file in the File name text box.

**2.** To print a file, follow the given steps :

**Step 1 :** Click on Office Button drop-down menu and select the Print option. The Print window will appear on the screen.

**Step 2 :** Select the desired printer.

**Step 3 :** Click on the Print button.

Hence, your file will be printed.

**3.** To change wallpaper of your desktop, follow the given steps:

**Step 1 :** Open the picture that you want to use as a desktop background.

**Step 2 :** Right click on the picture. A list of options will be displayed.

**Step 3 :** Select Set as desktop background option from the list.

Hence, the desktop background of your computer will be changed.

**4.** To open the already saved file, follow the given steps :

**Step 1 :** Click the Open option in the Office Button drop-down menu. A window will display on the screen. This is Open window.

**Step 2 :** Select the file you want to open.

**Step 3 :** Click on the Open button.

Hence, your file will be displayed on the screen.

*Activity Time*

Do yourself.

# Computer–3

## 1. Computer System

*Let's Do Something*

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

**B.** **1.** (b), **2.** (d), **3.** (e), **4.** (f), **5.** (c), **6.** (a)

**C.** **1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**D.** **1.** Computer is an electronic system that is made of devices that help you enter data, process it, store it and output the results.

    **2.** CPU is called the brain of the computer.

    **3.** Central Processing Unit consists of three parts:–

      • Arithmetic and Logic Unit

      • Control Unit

      • Memory Unit

    **4.** ALU performs all the arithmetical and logical operations in CPU.

    **5.** Memory unit is used to store data.

*Activity Time*

Do yourself.

## 2. Hardware and Software

*Let's Do Something*

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

**B.** **1.** (c), **2.** (a), **3.** (f), **4.** (b), **5.** (d), **6.** (e)

**C.** **1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**D.** **1.** Hardware is the physical component of a computer.

    **2.** Software is the logical component of a computer.

    **3.** Software are of two types– System software and Application software.

    **4.** Mouse, Keyboard, Printer, Monitor.

    **5.** Two main components of a computer system are hardware and software.

*Activity Time*

Do yourself

**B.** **1.** Output, **2.** Plotter, **3.** Input, **4.** Printer,

**5.** Speakers, **6.** Monitor, **7.** Inkjet, **8.** Projector.

## 3. Operating System : Windows 7

*Let's Do Something*

**A.** **1.** (b), **2.** (c), **3.** (c), **4.** (b), **5.** (c)

**B.** **1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (T)

**C.** **1.** Some elements of Windows are icons, taskbar, start button, etc.

    **2.** Operating system is a software program that provides an interface between hardware and software components of computer system.

    **3.** My Documents, Computer, Recycle Bin, Network.

    **4.** To change the position of taskbar, follow these steps :

    **Step 1 :** Move the mouse pointer on the taskbar.

    **Step 2 :** Click the right mouse button and select Properties option.

    **Step 3 :** A window will appear on the screen. In window, click on the list in front of Taskbar location on screen and select the desired option say : Right.

    **Step 4 :** Click on OK button.

    Hence position of taskbar will be changed on the screen.

*Activity Time*

Do yourself.

## 4. Notepad

*Let's Do Something*

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

**B.** **1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**C.** **1.** Notepad is a software program that allows you to write on the computer.

    **2.** To start Notepad application, select Start > All Programs > Accessories > Notepad

    **3.** Maximize button

    **4.** Elements of Notepad window are as under.

    • Title Bar • Minimize Button • Menu Bar

    • Maximize Button • Working Area

    • Close Button

    **5.** Scroll Bars

Do yourself

# 5. Drawing in Paint

*Let's Do Something*

**A. 1.** (b), **2.** (c), **3.** (a), **4.** (c)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** Line tool

**2.** To open an already saved drawing, follow the given steps :

**Step 1 :** Click on the Paint button and select Open option from the drop-down menu. An Open dialog box will appear.

**Step 2 :** Select the File name that you want to open.

**Step 3 :** Click on Open button.

**3.** To save a drawing, follow the given steps :

**Step 1 :** Click on the Paint button. Select Save option from the drop-down menu.

**Step 2 :** The Save As dialog box appears.

**Step 3 :** Type the file name in the File name text box.

**Step 4 :** Click on Save button. The file will be saved.

**4.** Polygon tool is used for drawing different types of polygons.

**5.** Text tool is used to write text on paint screen.

*Activity Time*

**A. 1.** Rectangle tool, **2.** Text tool, **3.** Airbrush tool, **4.** Polygon tool, **5.** Fill with color tool.

**B.** Do yourself.

# 6. Introduction to MS Word 2007

*Let's Do Something*

**A. 1.** (c), **2.** (b), **3.** (b), **4.** (b)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T)

**C. 1.** Vertical, **2.** Cursor, **3.** Exit Word, **4.** Ribbon, **5.** Status

**D. 1.** A word processor is a software that helps you to type text on a computer screen.

**2.** Quick access toolbar provides us with access to commands that we frequently use.

**3.** Save option is used to save a file in MS Word.

**4.** The steps to save a document are :

**Step 1 :** Click on the Office Button and select Save option.

**Step 2 :** The Save As dialog box will be displayed.

**Step 3 :** Type the file name in the File name text box.

**Step 4 :** Click on the Save button.

Hence, your file will be saved.

**5.** To close any document follow these steps :

**Step 1 :** Click on the Office button.

**Step 2 :** In the drop–down list, click on Close option.

*Activity Time*

Do yourself.

# 7. Introduction to LOGO

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** LOGO is a simple language used to draw figures, write text and do simple calculations.

**2.** MSW LOGO screen is divided into two sections :– • Main Screen • Commander Window.

**3.** The main screen is the area where pictures are drawn.

**4.** Command input box is used for typing the commands.

**5.** To execute the commands in MSW LOGO, follow the given below :

**Step 1 :** Click in the Input box at the bottom of MSW LOGO commander.

**Step 2 :** Type the command, say, FD 100.

**Step 3 :** Press the Enter key to execute the command.

*Activity Time*

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

# 8. LOGO Primitives

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (T)

**C. 1.** LOGO commands are known as primitives.

**2.** FD command draws a line in the forward direction for the given number of units.

**3.** HOME command brings the turtle to the starting position.

**4.** SETH command, followed by a number, turns the turtle towards the clockwise direction, no matter which way the turtle head is pointing.

**5.** CLEAN command is used to erase the entire drawing from the screen but there is no change in the position of the turtle.

*Activity Time*

**A. 1.** (ii), **2.** (iv), **3.** (i), **4.** (vi), **5.** (iii), **6.** (v)

**B. 1.** Clear Screen, **2.** Forward, **3.** Backward, **4.** Show Turtle, **5.** Clear Text, **6.** Hide Turtle.

## 9. Introducing Internet

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T), **5.** (T)

**C. 1.** Internet is a worldwide network of networks.

**2.** Some of the uses of internet are as follows :

➢ You can read your study material on the Internet.

➢ You can send and receive e-mail with the help of Internet.

➢ You can purchase a product through Internet.

➢ You can chat with people on the Internet.

➢ You can read news on Internet.

➢ You can get information on any topic through Internet.

**3.** A website is a collection of related web pages containing information related to a certain topic.

**4. (a)** There is no charge for sending and receiving email through internet. **(b)** Email is a quick method than the ordinary postage.

**5.** Websites and web pages are stored on powerful computers. These computers has very high capacity to keep information or data. These computers are known as web servers.

*Activity Time*

**A. 1.** World Wide Web

**2.** Uniform Resource Locator

**3.** Electronic-mail

**4.** Internet Service Provider

**B.** Do yourself.

# Computer–4

## 1. Evolution of Computers

*Let's Do Something*

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

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (F)

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

**D. 1.** Early man used to do calculation on fingers and with the help of stones and pebbles.

**2.** Abacus was the first calculating device which is used for addition and subtraction of numbers.

**3.** Pascaline was the calculating machine which consisted of a box with eight moveable wheels. Using pascaline addition, subtraction, multiplication and division could be easily done.

**4.** ENIAC stands Electronic Numerical Integrator and Calculator.

**5.** Characteristics of a computer are us under : – • A computer can perform basic operations at a very high speed. • Computers are very accurate. • A computer has a very high storage capacity. • Computer can perform different types of jobs efficiently. • Computer does not suffer from lack of concentration.

*Activity Time*

**1.** 1616, **2** 1642, **3** 1890, **4** 1946, **5** 19th Century.

**B.** Do yourself

## 2. Memory and Storage

*Let's Do Something*

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

**B. 1.** (b), **2.** (c), **3.** (e), **4.** (a), **5.** (d)

**C. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T)

**D. 1.** Memory is used to store data and instructions in CPU, Computer needs memory to store or give output of any program.

**2.** Two types of memory are found in computer:

Primary memory and Secondary memory.

3. Secondary storage devices are needed to store the data permanently.

4. **(i)** Hard Disk, **(ii)** Pen Drive, **(iii)** DVD.

5. Hard Disk is the main storage device of the computer which is fitted inside the CPU box. The hard disk consists of a set of magnetically coated disks placed one upon another and mounted together on a rotating hub. Each disk in the set has its own read and write head. The heads on these devices never touch the surface of the disk.

*Activity Time*

**A. 1.** Random Access Memory, **2.** Read Only Memory, **3.** Compact Disk, **4.** Digital Versatile Disk, **5.** Giya Byte

**B. 1.** Primary, **2.** Brain, **3.** RAM, **4.** Permanent, **5.** Bytes, **6.** Giga Byte, **7.** Bits, **8.** ROM.

# 3. Microsoft Windows

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (T), **5.** (F)

**C. 1.** To create a folder, follow the given steps :

**Step 1 :** Click the right mouse button where you want to create a folder.

**Step 2 :** A submenu appears. Choose the New option.

**Step 3 :** Click the Folder option.

**Step 4 :** Type the folder name.

**Step 5 :** Press the Enter key.

**2.** To create a file, follow the given steps :

**Step 1 :** Go to the folder in which you want to create a file.

**Step 2 :** Click on File menu.

**Step 3 :** Choose New option. A list of options will appear on the screen.

**Step 4 :** Click on Text Document.

**Step 5 :** Specify the name of your file.

**Step 6 :** Press the Enter key.

**3.** To copy a file, follow the given steps :

**Step 1 :** Right click on the file, you want to copy.

**Step 2 :** Choose the Copy option.

**Step 3 :** Move the mouse pointer where you want the file to be copied.

**Step 4 :** Right click anywhere on the screen.

**4.** To rename a file, follow the given steps :

**Step 1 :** Right click on the file to be renamed.

**Step 2 :** Choose the Rename option.

**Step 3 :** The file name will turn blue and cursor will be displayed.

**Step 4 :** Type the new name that you want to give to the file.

**Step 5 :** Press the Enter key.

**5.** When a file or folder is useless, you want to delete it. To delete a file, follow these steps :

**Step 1 :** Right click on file to be deleted.

**Step 2 :** Click on Delete option.

**Step 3 :** Windows confirms before deleting the file by showing a dialog box.

**Step 4 :** Click on Yes button.

**D. 1.** A file is a collection of data stored in a storage device and a folder is a named memory space to keep files.

**2.** To move a file, follow these steps :

**Step 1 :** Right click on the file, you want to move.

**Step 2 :** Choose the Cut option.

**Step 3 :** Move the mouse pointer where you want the file to be moved.

**Step 4 :** Right click anywhere on the new location and click on Paste option.

**3.** Notepad, Calculator, Paint and WordPad.

**4.** To rename a file, follow the given steps :

**Step 1 :** Right click on the file to be renamed.

**Step 2 :** Choose the Rename option.

**Step 3 :** The file name will turn blue and cursor will be displayed.

**Step 4 :** Type the new name that you want to give to the file.

**Step 5 :** Press the Enter key.

**5.** To open a file or folder, simply move the mouse pointer to the required file/folder and

double-click on it. The file/folder will open and you can view its contents.

*Activity Time*

**A.** Do yourself

**B. 1.** Rename, **2.** File, **3.** Two, **4.** New, **5.** Copy

## 4. Advanced Features of Paint

*Let's Do Something*

**A. 1.** (a), **2.** (a), **3.** (a), **4.** (a)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (T), **5.** (F)

**C. 1.** Select tool, **2.** Free-form Selection tool, **3.** Flip/Rotate, **4.** Flip, **5.** Resize

**D. 1.** We can select a picture using Free-form Selection tool, by following these steps :

**Step 1 :** Select the Free-form Selection tool in the Image group.

**Step 2 :** To select the object, place the pointer on to Drawing area.

**Step 3 :** Press and hold down the left mouse button and drag the pointer to select the part of the drawing.

**Step 4 :** Release the mouse button after selecting the drawing.

**2.** Flip/Rotate option is used to flip or rotate an object.

**3.** To resize a picture horizontally, follow the given steps :

**Step 1 :** Click on the Select tool and select the picture.

**Step 2 :** Select the Resize option in the Image group on the Home tab. Resize and Skew dialog box appears on the screen.

**Step 3 :** In the Resize section type percentage or number of pixels in Horizontal text box.

**Step 4 :** Click on OK button.

**4.** The Skew option allows you to change one end of the drawing while the other end is fixed.

**5.** MS Paint has two selection tools. They are Select tool and Free-form Selection tool.

*Activity Time*

**A. 1.** (b), **2.** (d), **3.** (e), **4.** (a), **5.** (c)

**B.** Do yourself.

## 5. Editing Text in MS Word 2007

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T)

**C. 1.** To make changes in your document, you have to first select the text in the document.

**2.** To delete a block of text in MS Word, follow the given steps:

**Step 1 :** Select the block of text is to be deleted.

**Step 2 :** Press the Delete key.

**3.** The steps for copying and pasting text are :

**Step 1 :** Select the text that you want to copy.

**Step 2 :** Click on the Copy button in the Clipboard group on the Home tab.

**Step 3 :** Place the cursor at the location where you want to paste the text.

**Step 4 :** Click on the Paste button in the Clipboard group on the Home tab.

**4.** The steps to select a paragraph in MS Word are :

**Step 1 :** Place the cursor to the left of the first character to be selected.

**Step 2 :** Hold down the left mouse button and drag it to a position where you want to stop selection.

**Step 3 :** Release the mouse button.

**Step 4 :** The selected text gets highlighted.

*Activity Time*

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

## 6. Formatting Text in MS Word 2007

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F)

**C. 1.** Formatting is the general arrangement of text. It helps in changing the appearance of text by using various fonts, colours, sizes and styles.

**2.** To change font type and font size, follow the given steps :

**Step 1 :** Select the text for which you want to change font type or font size.

**Step 2 :** To change the font size, click on Font Size drop-down arrow in the Font group and select any font size.

**Step 3 :** To change the font type, click on the drop-down arrow present next to the Font Style box and select the desired font from the displayed list.

3. Left align, Center align, Right align, Justify align.

4. Border and shading can be applied to the text by following steps :

**Step 1 :** Select the text.

**Step 2 :** Click on the drop-down arrow next to the Border button in the Paragraph group on the Home tab. Select Borders and Shading option. The Borders and Shading dialog box appears on the screen.

**Step 3 :** Under Setting section, click on Box option.

**Step 4 :** Under the Style section, select the line style.

**Step 5 :** Select the Colour and Width.

**Step 6 :** Click the drop-down arrow of Apply to section and select the Paragraph option.

**Step 7 :** Click on OK button and observe the change.

5. To change the font colour, the steps are :

**Step 1 :** Select the text that you wish to colour and click on Home tab.

**Step 2 :** Click on the triangular drop-down arrow next to the Font Color. button on the Home tab. It will open a list of colours.

**Step 3 :** Select the desired colour from the displayed colours. The colour of the text will be changed.

6. Alignment is the way of placing the text between margins of a page.

*Activity Time*

1. (c), 2. (d), 3. (f), 4. (a), 5. (b), 6. (g), 7. (e)

## 7. Arithmetic Operations in LOGO

*Let's Do Something*

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

B. 1. (T), 2. (T), 3. (F), 4. (T), 5. (F)

C. 1. PRINT, 2. PR, 3. CT, 4. Quotient, 5. arithmetic

D. 1. PRINT "ARNAV

2. Four arithmetic operations are used in LOGO. They are : Additon (+), Subtracion (–), Multiplication (*) and Division (/).

3. To add more than two numbers using the sum operator, the numbers have to be written in round brackets like : PR (SUM 37 23 15)

4. Quotient function takes two inputs. It divides the first number by the second and given the quotient as the result.

5. Clear text command is used to clear the text screen.

*Activity Time*

A. Do yourself.

B. Do yourself.

## 8. LOGO Procedures

*Let's Do Something*

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

B. 1. (F), 2. (T), 3. (T), 4. (F), 5. (F)

C. 1. A procedure is a set of instructions written one after the other to perform a particular task and referred to by a name.

2. Some rules which you must follow while naming the procedure name are :

➢ The first character should always be a letter. For example, Bag, A326, etc.

? Blank spaces should not be used. For example, 'Red Square' is an invalid name.

? Arithmetic operators +, –, *, / cannot be used in the name. For example, 'A*BC' name is invalid.

? Logo primitive's names should not be used in procedure name. For example, 'FD' name is invalid.

3. To erase a procedure, select Erase option of the File menu in MSW LOGO window. A box will display on the screen. Click on the procedure name which you want to delete and click OK button.

4. To recall a saved procedure, LOAD command is used with the syntax LOAD 'Procedure Name'.

**5.** A LOGO procedure has three parts : **(i)** Title line, **(ii)** Body, **(iii)** End line.

**6.** To save a procedure, follow the steps given below :

**Step 1 :** Click on the File menu of MSW LOGO screen.

**Step 2 :** Select Save option from the File menu.

**Step 3 :** The Save As dialog box appears.

**Step 4 :** Type the name for the file in the File name text box and add '.lgo' extension in the Save as type box.

**Step 5 :** Click on Save button.

*Activity Time*

Do yourself.

## 9. Browsing Internet

*Let's Do Something*

**A. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F)

**B. 1.** Internet is a computer network made up of millions of computers worldwide.

**2.** Modem is used because it is the medium that service in exchanging information between a computer and the internet.

**3.** The page full of information viewed on internet is called web page.

**4.** Search engine is used to find information on the internet related to any topic.

**5.** To open a website, follow the steps given below :

**Step 1 :** Double click on the web browser icon, say Internet Explorer on the desktop.

**Step 2 :** The explorer will open and display a web page (known as Home Page).

**Step 3 :** Type the URL of the website.

**Step 4 :** Press the Enter key.

*Activity Time*

WWW = World Wide Web, MODEM = Modulator and Demodulator, URL = Uniform Resource Locator, ISP = Internet Service Provider, LAN = Local Area Network

# Computer–5

## 1. Computer : History and Generations

*Let's Do Something*

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

**B. 1.** (F), **2.** (T), **3.** (F), **4.** (T), **5.** (T), **6.** (F), **7.** (F)

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

**D. 1.** Pascaline was the first mechanical calculator. It consisted of a box with eight movable wheels. Using Pascaline addition, subtraction, multiplication of numbers as big as hundreads, and thousands could be easily done.

**2.** Analytical engine was the first general purpose computer. This machine had the same basic elements as the modern computers : input, output and memory devices.

**3.** The third generation computers used Integrated Circuits, popularly known as chips, instead of transistors. These computers were smaller in size as compared to second generation computers. Capacity of main memory was greatly enlarged in these computers. These computers used an operating system that allowed machines to run many different programs simultaneously. Example : IBM 370, Honeywell 2000.

**4.** Difference Engine and Analytical Engine.

**5.** In 1821, Charles Babbage invented a machine called the Difference Engine to prepare mathematical tables. This machine used punch card that is the basic concept of modern computer and because of this invention, Charles Babbage is known as the Father of Computer.

*Activity Time*

**A. 1.** Sir John Napier, **2.** Gottfried Von Leibnitz, **3.** Charles Babbage, **4.** Howard Aiken, **5.** Blaise Pascal.

**B.** Do yourself.

## 2. Knowing About Computer's Process

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (c), **4.** (c), **5.** (a), **6.** (c)

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (T)

**C. 1.** The device used to enter data or intructions

into the computer is called input device. Keyboard and mouse are input device.

2. The device through which you see the output from the computer is called output device. Moniter and printer are most commonly used output device.

3. Computer follows the working of I–P–O cycle. I–P–O stands for Input – Process – Output cycle.

4. A microphone is used to input sound into the computer while speakers are used to output sound from the computer.

5. CPU is the brain of the computer. All the processing and calculations of computer are performed by CPU. Without CPU a computer is useless.

*Activity Time*

**A. 1.** (b), **2.** (f), **3.** (e),  **4.** (b),  **5.** (a), **6.** (d)

**B.** Do yourself.

## 3. Features of MS Word 2007

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**C. 1.** Thesaurus are used to find synonyms for the words typed in the document.

2. To change the text to lower case, follow the given steps :

**Step 1 :** Select the text for which you want to change case.

**Step 2 :** Click on **Change Case** button in the **Font** group of **Home** tab. A list of options will appear on the screen.

**Step 3 :** Select **lowercase** option.

3. **(i)** Sentence case, **(ii)** lower case, **(iii)** upper case, **(iv)** Capitalize each word, **(v)** Toggle case.

4. The steps to add bullets to existing text are :

**Step 1 :** Select the text.

**Step 2 :** Click on the Bullets button in the Paragraph group on the Home tab.

**Step 3 :** Choose the style that you want to use for the bullets in the list.

5. The steps to find text in a document are :

**Step 1 :** Select Home tab. Click on the Find button in the Editing group. A menu appears on the screen.

**Step 2 :** Select the Find option in the menu. Find and Replace dialog box appears on the screen.

**Step 3 :** In the Find what box, enter the text that you want to search and press Enter key.

**Step 4 :** Click the Find Next button to find the next occurrence of the given text. If MS Word finds the text, it will highlight the text or word in the document.

**Step 5 :** Repeat step 4 until MS Word has finished searching the document.

**Step 6 :** When the search is finished, a Message box will appear. Click on OK button on the Message box.

**Step 7 :** Select the Highlight All option of Reading Highlight button. The given words will be highlighted in the entire text.

**Step 8 :** Close the Find and Replace dialog box.

*Activity Time*

**A. 1.** Find, **2.** Proofing, **3.** Ctrl+F, **4.** Paragraph, **5.** Ctrl+B

**B.** Do yourself.

## 4. Creating Tables in MS Word

*Let's Do Something*

**A. 1.** (c), **2.** (c), **3.** (a), **4.** (a), **5.** (a), **6.** (b)

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** Table is the combination of rows and columns. Tables are used to organize and manage data in tabular form.

2. The steps to create a table in a document are :

**Step 1 :** Place the cursor on the work area where you want to create a table.

**Step 2 :** Select the Insert tab. Click on the Table button in the Tables group.

**Step 3 :** A menu will appear on the screen. Select the Insert Table option. The Insert Table dialog box gets displayed.

**Step 4 :** Specify the number of rows and columns in the dialog box.

**Step 5 :** Click on OK button.

3. The steps to merge cells are :

    **Step 1 :** Select the cells you want to merge.

    **Step 2 :** Click on Layout tab. Click on Merge Cells button in the Merge group.

4. To steps to delete a column of a table are as under :

    **Step 1 :** Select the column you wish to delete.

    **Step 2 :** Click on **Delete** button on **Rows & Columns** group

    **Step 3 :** Select **Delete Columns** option from the menu.

    **Step 4 :** Click on **OK** button.

5. Border is a black solid line around all the table cells. MS Word applies a 0.5 point black solid line border around all the table cells. Shading is the style of border.

*Activity Time*

**A. 1.** Table, **2.** Insert, **3.** Insert Below, **4.** Table, **5.** Alt+O+B

**B.** Do yourself.

## 5. Working with Objects in MS Word

*Let's Do Something*

**A. 1.** (b), **2.** (c), **3.** (c), **4.** (b), **5.** (b)

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** Clip Art is a gallery of pre–designed pictures that can be inserted into a document. Clip Art gallery consists of several categories of clips.

2. Word Art is a feature of MS word that allows you to create some special effect and uniq u e look to the text.

    To insert WordArt in a document, follow the given steps :

    **Step 1 :** Select the Insert tab.

    **Step 2 :** Click on WordArt button in the Text group. Choose a WordArt style from the given grid.

    **Step 3 :** The Edit WordArt Text window appears with a selected placeholder text.

    **Step 4 :** Choose the Font and Size of your text.

    **Step 5 :** Type the text in the blank area and click on the OK button.

3. Word Art button is located on **Insert** tab.

4. To insert a picture from file, follow the given steps :

    **Step 1 :** Place the cursor at the position where you want to insert your picture.

    **Step 2 :** Click on Picture button in the Illustrations group on the Insert tab.

    **Step 3 :** The Insert Picture window appears. Select the desired picture file.

    **Step 4 :** Click on the Insert button.

5. Shapes is a drawing feature that helps you to draw different shapes like stars, banners, callouts, connectors, etc.

6. To write text in a shape, follow the given steps :

    **Step 1 :** Place the cursor at the position where you want to write text in a shape.

    **Step 2 :** Select a shape of your choice from the Shapes drop-down menu.

    **Step 3 :** Drag the selected shape in the document according to your need.

    **Step 4 :** Now right click on the drawing object and select the Add Text option from the shortcut menu.

    **Step 5 :** Insertion point appears in the object. Now you can type the text in the document.

*Activity Time*

Do yourself..

## 6. Customizing Windows

*Let's Do Something*

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

**B. 1.** (F), **2.** (T), **3.** (F), **4.** (T), **5.** (T)

**C. 1.** Operating system is a software program that provides an interface between hardware and software components of computer system. Windows 7 is the latest version of windows operating system.

2. When you want to save your time in accessing commands or accessing any program, you use shortcut menu also known as context menu.

3. The steps of creating shortcut of Notepad program are :

    **Step 1 :** Move on Start > All Programs >

Accessories > Notepad

**Step 2 :** Right click on the **Notepad** option.

**Step 3 :** A pop–up menu with a list of options appears on the screen.

**Step 4 :** Select **Send to** option, another cascading menu appears on the screen.

**Step 5 :** Now click on **Desktop (**create shortcut) option.

**Step 6** : Click on any blank space on desktop or press **Esc** button.

4. The right pane consists of the following items :

Current user, Documents, Pictures, Music, Games, Computer, Control Panel, etc.

*Activity Time*

Do yourself.

## 7. Introducing MS PowerPoint 2007

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (b), **4.** (c), **5.** (c), **6.** (b)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

**C. 1.** Slides are the individual pages of a MS PowerPoint presentation.

**2.** To start Microsoft PowerPoint, follow the steps given below:

**Step 1 :** Click on Start button.

**Step 2 :** Select All Programs option.

**Step 3 :** Point on Microsoft Office. A sub-menu appears.

**Step 4 :** Now click on Microsoft Office PowerPoint 2007. The Microsoft PowerPoint window appears.

**3.** PowerPoint is a presentation software It is used to create professional presentations.

**4.** To save a presentation, follow the steps given below :

**Step 1 :** Select Save option of Office button drop-down menu.

**Step 2 :** The Save As dialog box appears on the screen.

**Step 3 :** Type the file name in the File name text box.

**Step 4 :** Click on Save button.

**5.** To close a presentation, follow the steps given below :

**Step 1 :** Click on the Close option of Office button drop-down menu.

**Step 2 :** If the file has not been saved, MS PowerPoint will display a dialog box asking you to save the changes you have made.

• Click Yes if you want to save the changes done in the presentation.

• Click No if you don't want to save the changes done in the presentation.

• Click Cancel if you want to return to the presentation.

*Activity Time*

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

## 8. MS PowerPoint : Working With Text

*Let's Do Something*

**A. 1.** (b), **2.** (a), **3.** (a), **4.** (c), **5.** (b), **6.** (b)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T)

**C. 1.** To place text anywhere on a slide, you first need to add a new text box.

The steps to add a new text box on the slide are:

**Step 1 :** Select Insert tab.

**Step 2 :** Click on Text Box button on the Text group.

**Step 3 :** Move the cursor to the place on the slide where you want to add the text box.

**Step 4 :** Hold down the left mouse button. Drag the mouse down and to the right to draw the text box.

**Step 5 :** Release the mouse button, when the text box is of desired size.

**2. (i)** Sentence case, **(ii)** lower case, **(iii)** upper case, **(iv)** capitalize each word, **(v)** toggle case.

**3.** Mouse pointer takes the + shape.

**4.** If you want bulleted list in your slide then follow these steps:

**Step 1 :** Select Home tab.

**Step 2 :** Click on Bullets button drop-down menu in the Paragraph group.

**Step 3 :** A list of options will appear on clicking the drop-down menu. Select Bullets

and Numbering option.

**Step 4 :** Bullets and Numbering dialog box will appear on the screen. Select an appropriate layout of bullets or numbering that you want and click on OK button.

5. The steps to delete text from a slide are :

**Step 1 :** Select the text that you wish to delete.

**Step 2 :** Press Delete key on the keyboard.

Hence, selected text will be deleted from the slide.

*Activity Time*

1. F7, **2.** Proofing, **3.** Home, **4.** Toggle case, **5.** New slide button.

## 9. Multimedia

*Let's Do Something*

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

**B. 1.** (F), **2.** (F), **3.** (F), **4.** (T), **5.** (T)

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

**D. 1.** Multimedia is an application that combines and executes text, sound, video, animation and graphics simultaneously.

2. Windows Media Player is a multimedia application. It is used to listen to an audio or a video CD on the computer.

3. To start Windows media player, follow the given steps :

**Step 1 :** Click on the **Start** button.

**Step 2 :** Select **All Programs**.

**Step 3 :** Click on **Windows Media Player**.

4. Education, Advertising, Playing games and Creating presentation.

5. Different components of a multimedia file are :

**Text :** It is the textual data in the form of alphabets, numbers and symbols.

**Sound :** It is the data in the form of voice and speech.

**Picture :** It is the data in the form of images like graphics and clip arts.

**Photographs :** These are actual still pictures.

**Video :** These are actually moving pictures or images.

**Graphics :** It is the creation and manipulation

of static images or pictures.

**Animation :** It is the series of moving pictures with slightly different movement so as to create an illusion of movement.

*Activity Time*

1. Video, **2.** Sound, **3.** Photographs, **4.** Animation, **5.** Text.

## 10. Algorithm and Flowchart

*Let's Do Something*

**A. 1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (T)

**B. 1.** Algorithm is a set of instructions that uses a step by step description of the procedure.

2. A flowchart is a representation of a problem–solving process, in which steps are laid out in a logical order.

3. Decision box is used when one needs to choose between options and the condition of Yes/No arises.

4. Process box is used for writing processes or actions for example, multiplying two numbers.

5. Flow lines are used to show the flow of logic in a flowchart.

*Activity Time*

Do yourself.

# Computer–6

## 1. Computer Peripherals

*Let's Do Something*

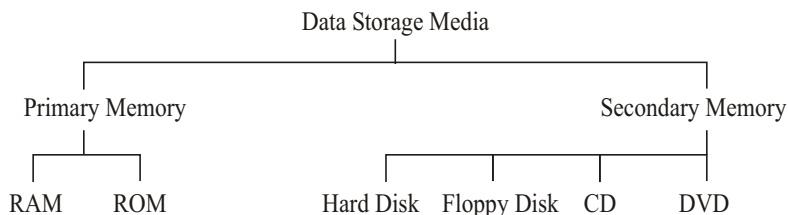**A. 1.** (a), **2.** (c), **3.** (b), **4.** (d), **5.** (d)

**B. 1.** (F), **2.** (F), **3.** (T), **4.** (T), **5.** (F)

**C. 1.** The input and output devices attached to a computer are called computer peripherals. 2. Memory is of two types : **(i)** Primary Memory **(ii)** Secondary Memory

**Primary Memory :** This memory is also known as Main Memory. Primary memory is used as a form of temporary memory for calculation processes and storage of temporary values that need rapid access or updating. The contents of the primary memory disappear when the power is turned off. Primary memory is important while executing programs. Bigger programs require more primary memory.

**Secondary Memory :** This memory is also called auxiliary memory or back-up memory. Secondary memory is used for the storage of most of the system's data, programs and all other permanent data that should stay there even when the power is turned off. As a computer is fed with bigger, smarter programs and more data, it would naturally need more secondary memory to hold them.

3. **(i)** Random Access Memory (RAM)

  - The CPU uses this memory while processing information.
  - This is also called read/write memory.
  - This memory is temporary in nature.

   **(ii)** Read Only Memory (ROM)

  - ROM contains a basic set of instructions called the Basic Input-Output System which helps to start the operating system.

  - It is a memory unit that can only be read from.
  - It is a permanent memory.

4. A computer has a very large internal memory. It can store a vast amount of information and can recall that information instantly and correctly whenever desired. The memory of a computer can be classified into primary memory and secondary memory.

```
                    Data Storage Media
                           |
        ┌──────────────────┴──────────────────┐
   Primary Memory                      Secondary Memory
        |                                       |
   ┌────┴────┐              ┌─────────┬─────────┬─────────┐
  RAM      ROM         Hard Disk  Floppy Disk  CD       DVD
```

5. Output devices are used to get result or information from the computer system. These devices convey information from the computer to the user. Two commonly used output devices are monitor and printer.

6. A light pen is a pointing device shaped like a pen and is connected to a monitor. A light pen consists of a photocell mounted on a pen-shaped tube and is capable of sensing a position on the screen when its tip touches the screen.

# 2. Advance Features of MS Word

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F)

**C. 1.** To change the paper size, follow the given steps :

   **Step 1 :** Select the Page Layout tab. Click the Margins button in the Page Setup group. A drop-down list of options appears.

   **Step 2 :** Select the Custom Margins option. The Page Setup dialog box will appear.

   **Step 3 :** Select the Paper tab in the Page Setup dialog box.

   **Step 4 :** Select a predefined paper size from the Paper size drop-down list. or You can also specify the width and height of your paper in which the page is being printed in Width and Height boxes.

   **Step 5 :** Click on OK button to apply the selected new settings to your document.

2. Paragraph alignment means the way of placing the paragraph between the margins of a page.

3. To print a document, follow the given steps :

   **Step 1 :** Click on the Office Button and move mouse on the Print option.

   **Step 2 :** Click on the Print option. The Print dialog box opens.

   **Step 3 :** In the Printer section, you can select the printer to be used for printing, in the Name drop-down list.

   **Step 4 :** Page range section allows you to choose the pages to be printed. You can print all pages of the document, current page or you can specify the range of pages, e.g., 6–12, for consecutive pages and specify individual pages using comma ',' operation in the Pages box.

   **Step 5 :** In the Copies section, specify how many printouts you want to take of your document.

   **Step 6 :** Press OK button to get the printouts of your document.

4. Header is the text that is printed at the top of each page in the document, whereas footer is the text printed at the bottom of the page in the

document.

5. Performing a mail merge, involves three basic steps :

**1. Creating the main document :** This contains the standardized text that will be printed on all the merged documents. The main document has a merge field. This is a place holder which instructs where and what will be inserted from the data source.

**2. Creating the data source :** This is a file which contains the variable data that is to be inserted in the document. In the above case, the addresses of all the persons to whom letters have to be sent, will form the variable data that is stored in the data source.

**3. Merging** the data source and the main document.

6. Creating a Recipient list involves three steps :

**Step 1 :** Click the option Type a new list under Select recipients and then click at Create to get a New Address List dialog box.

Here, type the details of the first recipient. You can leave the fields blank, if not required. After typing the details of first entry, click at New Entry button to get the next blank form. After typing all the entries, click on Close button. Save Address List dialog box appears. Type the desired name and click on Save button.

**Step 2 :** Mail Merge Recipients window appears which shows the data you have entered. You can edit the data you want.

**Step 3 :** Click on OK button.

## 3. MS PowerPoint Presentation

*Let's Do Something*

A. **1.** (c), **2.** (b), **3.** (c), **4.** (c), **5.** (b)

B. **1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (F)

C. **1.** A slide is the individual page of the presentation to which you can add text, colours, pictures and sound.

**2.** MS PowerPoint is the most commonly used software for creating presentations. It is widely used in offices for creating business presentations. It is one of the members of microsoft office family and also in schools for creating presentations on different topics.

3. To insert SmartArt in your presentation, follow the given steps :

**Step 1 :** Select a slide from your presentation where the SmartArt has to be inserted.

**Step 2 :** Click on SmartArt button in the Illustrations group on Insert tab.

**Step 3 :** Choose a SmartArt Graphic dialog box appears on the screen. Select a type of SmartArt from the available list.

**Step 4 :** Click on OK button after selecting suitable SmartArt.

**Step 5 :** SmartArt will be inserted on the slide. Now you can add text inside the SmartArt diagram according to your requirements.

4. To change theme of your presentation, follow the given steps:

**Step 1 :** Select Design tab.

**Step 2 :** Scroll the mouse over the available themes and select the desired theme under Themes group. The selected theme will be applied in your presentation.

**Step 3 :** For more themes, click on the More drop-down arrow at the bottom right corner of Themes group.

**Step 4 :** A drop-down menu will appear. In the drop-down menu, you can select theme of your choice.

5. To create a presentation using built-in template, follow the given steps :

**Step 1 :** To start MS PowerPoint, select Start > All Programs > Microsoft Office > Microsoft Office PowerPoint 2007.

**Step 2 :** Click on New option of the Office Button drop-down menu. The New Presentation dialog box will appear.

**Step 3 :** Click on Installed Templates option under Templates section.

**Step 4 :** Select a template of your choice from the Installed Templates section and click on Create button.

**Step 5 :** The selected template opens as a new presentation. The new presentation contains various slides, illustrating different slide layout, backgrounds, themes, etc.

**6.** Templates are the sets of pre–designed formats that include text, layouts, colour schemes, pictures, sound etc. that help in creating a beautiful presentation.

## 4. Working With Slides in PowerPoint

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (T), **4.** (F), **5.** (F)

**C. 1.** Normal view is divided into three panes – Outline pane, Slide pane and Notes pane.

**2.** Notes pane is used to add the information you want to share with the audience.

**3.** To apply colour scheme to the slide, follow the given steps :

**Step 1 :** Open your presentation and choose the slide whose colour scheme you want to change.

**Step 2 :** Move the mouse over a theme in the Themes group on Design tab.

**Step 3 :** Select the desired theme. The theme will be applied to all the slides.

**Step 4 :** Click on Colors button in the Themes group and select the colour scheme of your choice.

**Step 5 :** To apply the colour scheme to :

- all the slides, right-click on the colour scheme and select the Apply to All Slides option.

- the selected slide, right-click and select the Apply to Selected Slides option.

**4.** Each slide has its own layout, called slide layout, Layout refers to the way, the things are organized on a slide.

**5.** To change slide layout, follow the given steps :

**Step 1 :** Choose the slide whose layout you want to change in your presentation.

**Step 2 :** Click on Layout button in the Slides group on the Home tab.

**Step 3 :** A drop-down list appears on the screen called the Layout drop-down list with various layouts.

**Step 4 :** Select the layout according to your requirements and observe the changes in your slide.

**6.** To apply texture to the background, follow the given steps :

**Step 1 :** Click on Background Styles button, present in the Background group on Design tab. A list of options will be displayed.

**Step 2 :** Click on Format Background option. The Format Background dialog box will appear on the screen.

**Step 3 :** Click the required radio button, say, Picture or texture fill.

**Step 4 :** Select the various options according to your choice and click on Apply to All button.

**Step 5 :** Close the Format Background dialog box.

## 5. Adding Graphics and Objects in MS PowerPoint

*Let's Do Something*

**A. 1.** (d), **2.** (c), **3.** (b), **4.** (d), **5.** (d)

**B. 1.** (F), **2.** (T), **3.** (F), **4.** (T), **5.** (F), **6.** (T)

**C. 1.** Clip Art is used to add pictures in the slides. You can add Clip Art images to the existing slide and enhance its appearance.

To insert Clip Art in your presentation, follow the given steps :

**Step 1 :** Open the slide and place the cursor on which you want to insert the Clip Art image.

**Step 2 :** Click on the Clip Art button in the Illustrations group on Insert tab.

**Step 3 :** Clip Art task pane will appear on the right side of the window.

**Step 4 :** In the Search for text box, type the word or phrase of the picture you want to insert and click on Go button.

**Step 5 :** It will display the list of Clip Art images related to your typed word or phrase.

**Step 6 :** Click on the desired Clip Art to insert it in the slide.

**2.** To insert WordArt on the slide, follow the given steps :

**Step 1 :** Click the WordArt button in the Text group on Insert tab.

**Step 2 :** WordArt gallery drop-down menu appears on the screen. Click on the required WordArt style.

**Step 3 :** A placeholder appears on the screen with sample text 'Your Text Here'. In the placeholder, type something say 'Signature Books International'.

**Step 4 :** Select the typed text and click on Text Fill drop-down arrow in WordArt Styles group on the Format tab. Select the desired colour for your text and observe the change.

**Step 5 :** Click on Text Outline drop-down arrow. Choose the desired outline colour from the displayed list.

**Step 6 :** Click on Text Effects drop-down arrow and click on the desired effect you want to give to your text.

3. Shapes is a drawing feature that helps to draw different shapes like Stars, Banners, Flowcharts, Callouts, etc.

   To insert shapes on the slide, follow the given steps :

   **Step 1 :** Open the slide on which you want to insert shape object.

   **Step 2 :** Click on Shapes button in Illustrations group on the Insert tab.

   **Step 3 :** Shapes drop-down menu appears on the screen with various shapes like Lines, Rectangles, Block Arrows, Callouts, etc.

   **Step 4 :** Select the category and from the different shapes of that category, click one that you want to draw.

   **Step 5 :** Bring the mouse pointer on the slide and drag diagonally to draw the shape of desired size.

   **Step 6 :** To resize a shape, select the shape by clicking on it. It displays eight handles on the object. Place the mouse pointer on any handle. The pointer changes to double-headed arrow. Drag the handle to increase or decrease the size of shape.

4. To write text in a shape, follow the given steps:

   **Step 1 :** Select the shape on which you want to write text.

   **Step 2 :** Right-click on the shape. A list of options will appear on the screen. Click on Edit Text option.

   **Step 3 :** Cursor will appear on the middle of shape. Now write the text on the shape.

   Hence, you can write text on your desired shape.

5. To insert a table in a presentation, follow the given steps :

   **Step 1 :** Open the slide on which you want to insert a table.

   **Step 2 :** Click on Table button in the Tables group on Insert tab. A list of options appears on the screen.

   **Step 3 :** Select the Insert Table option. The Insert Table dialog box gets displayed on the screen.

   **Step 4 :** Specify the number of rows and columns in the dialog box and click on OK button.

6. A chart is a graphical presentation of data. It is an effective way to display data in pictorial form. Charts make it easier to show comparison, growth and relationship among the values in data.

7. To create a chart in PowerPoint, follow the given steps :

   **Step 1 :** Open the slide on which you want to create a chart.

   **Step 2 :** Click on Chart button in the Illustrations group on Insert tab.

   **Step 3 :** Insert Chart dialog box gets displayed. Select the chart of your choice and click on OK button.

   **Step 4 :** The chart will be displayed with a datasheet that contains the default data. You can enter your own data in the datasheet. To delete all the data from the datasheet, move the mouse pointer to Blank button.

   **Step 5 :** The mouse pointer changes into a large plus sign '**+**' of white colour. Click on the button and press the Delete key to delete the data.

   **Step 6 :** Type the table in the worksheet whose data you want to see in chart form.

**Step 7 :** As you enter the data, the chart gets plotted automatically.

**Step 8 :** To close the datasheet, click on the Close button on the Title bar.

## 6. Windows 7

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (F), **5.** (T)

**C. 1.** Microsoft is well-known for continuously improving the various features of Windows, and this has lead to many versions of it. After the arrival of many versions of Windows 1, 2 and 3, the company brought out Windows 95 and Windows 98. Windows ME (Millenium Edition) was released after Windows 98, which adopted the features of both the Windows 98 and Windows 2000. Windows XP and Windows Vista were later developed in this series. The most recent version is called the Windows 7.

**2.** Windows 7 has its six different editions. These are :

- Windows 7 Starter
- Windows 7 Home Basic
- Windows 7 Home Premium
- Windows 7 Professional
- Windows 7 Enterprise
- Windows 7 Ultimate

**3.** Aero Shake, Aero Snap, Aero Peek, Sticky Notes.

**4.** Pinning allows easy tracking and opening of an application. Any application can be pinned to the task bar by dragging and dropping it on to task bar. You can also right-click on the shortcut of an application in the Start menu and select the option 'Pin in the taskbar'.

To remove the pinned application from task bar, just right click on the specified pinned icon on the task bar and click 'Unpin this program from taskbar'.

**5. Aero Snap**

Snap enables you to control the window size and location on your desktop. You can move a program window to the left or right of the desktop, maximize or minimize it just by moving it.

**Aero Peek**

This feature helps you to view the desktop without minimizing or closing programs. After viewing, you can instantly bring the program windows back to their original positions. This is accomplished through a 'Show Desktop' button that appears at the right-most end of the task bar.

**6.** Jump list provides quick way to find the opened or recently opened files. Do you remember the 'Recent Documents' in the previous version of Windows? Yes, jump list resembles the same feature. However, jump lists are grouped by the program to which the file belongs. This allows you to open files from the same taskbar button that you use to open the program.

**7.** To display two application windows at the same time, follow the given steps :

**Step 1 :** Open MS PowerPoint and MS Excel programs one by one. The PowerPoint window is active as present.

**Step 2 :** Now, right-click anywhere on the blank portion of the taskbar.

**Step 3 :** A list of options will appear on the screen.

**Step 4 :** Click on Show Windows side by side option from the shortcut menu. Both the application windows will be displayed side by side.

## 7. MS Excel 2007

*Let's Do Something*

**A. 1.** (c), **2.** (a), **3.** (d), **4.** (b), **5.** (c), **6.** (b)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (T), **6.** (F)

**C. 1.** Microsoft Excel is an electronic spreadsheet. It is an application software that helps in calculation using formulae and analysis of data using tables. It allows you to arrange data into rows and columns. It also facilitates speedy and accurate mathematical calculations.

**2.** Three types of data can be entered in an MS Excel worksheet :  • Number  • Text  • Formulae

### Number

Number data is formed with numeric digits 0–9 and is used for the calculations. By default numbers are right aligned in a cell.

### Text

Text data consists of alphabets, combination of alphabets, and numbers which cannot be used for the calculation. Text data is always left aligned in the cell.

### Formulae

Formulae consists of mathematical operators and cell address. You can enter formulae which will give 'answer' after calculation, that is a number. It always start with a '=' sign. Example, '= A1 + B1'.

3. There are 65536 rows and 256 columns in an Excel worksheet.

4. Workbook is the collection of worksheets. Initially there are only three worksheets in a workbook but you can insert as many as you want.

5. A cell is the smallest unit of a worksheet, formed by the intersection of a row and a column. Each cell has a unique address formed by the combination of a column letter and a row number.

6. To edit data, perform the following steps :

   **Step 1 :** Select the cell that you wish to edit.

   **Step 2 :** Double click on it or press F2 key. Either way, the cursor is positioned at the end of the content of the cell. Use the Backspace key to remove one character at a time.

   **Step 3 :** However, to remove the entire content of a cell, start typing the new content by selecting the cell. The old content is replaced by the new one.

7. The cell having a dark border, is called the active cell. You work in one 'active cell' at a time. The border around the active cell is called the cell pointer.

### 8. Editing Cell Contents in MS Excel

*Let's Do Something*

A. **1.** (c), **2.** (d), **3.** (a), **4.** (b), **5.** (d), **6.** (d)

B. **1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (F)

C. **1.** After you have entered data into a cell, you can make changes in it. There are two ways in which you can edit the cells data : **(i)** By overwriting cell contents  **(ii)** By modifying cell contents partially

2. Row height is automatically adjusted in MS Excel if you enter taller characters. But, to manually change the height of a single row, click on the bottom border of the row–heading and drag it up or down.

   To change the height of several rows at once, follow the given steps :

   **Step 1 :** Select the required rows for which you want to change height.

   **Step 2 :** Click on Format button in the Cells group. A menu appears. Select Row Height option.

   **Step 3 :** A dialog box appears called Row Height dialog box.

   **Step 4 :** Enter the new height of the current rows and click on OK button.

3. To change the width of several columns at once, follow the given steps :

   **Step 1 :** Select the required columns for which you want to change width.

   **Step 2 :** Click on Format button in the Cells group. A menu appears. Select Column Width option.

   **Step 3 :** A dialog box appears called Column Width dialog box.

   **Step 4 :** Enter the new column width in the Column width text box and click on OK button.

4. When you need to add a row or column in a worksheet which is already created, follow the given steps :

   **Step 1 :** Select the row immediately below the point where you want to insert a new row. To insert a new column, select the column to the right of the point of insertion. You can select the entire row by clicking on the row header or the column header to select the entire column.

   **Step 2 :** Click on Insert button drop-down menu in the Cells group on Home tab.

   **Step 3 :** A submenu appears on the screen.

Click on Insert Sheet Rows option to insert a new row and Insert Sheet Columns option to insert a new column.

5. The Undo command allows you to reverse that last action you have performed. Redo command is used to quickly repeat the last action that you have done using Undo command.

6. MS Excel's Autofill feature lets you enter a predefined series of data such as text or numbers quickly in a worksheet. It can be applied in a worksheet by using following procedure.

   **Step 1 :** Enter the first two values of the data in adjacent cells. The first two data values determine the increment value and the starting number for the series.

   **Step 2 :** Select the two cells.

   **Step 3 :** Click the AutoFill handle (a small black square) in the lower right corner of the selected cells and drag it down to enclose the area you want to fill with the number series.

   **Step 4 :** Release the mouse button. The cells enclosed in the gray border will be filled with the desired number series.

D. **1.** Ctrl + Z, **2.** Ctrl + Y, **3.** Ctrl + C, **4.** Ctrl + V, **5.** Ctrl + A

## 9. Exploring Internet

*Let's Do Something*

A. **1.** (c), **2.** (b), **3.** (c), **4.** (d), **5.** (b)

B. **1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (T)

C. **1.** Internet is a global network of computers, used for sharing information.

   **2.** E-mail is an electronic mail sent from one computer to another. It is the most widely used application. It is a facility on internet to compose, store, send and receive messages to any part of the world.

   **3.** The advantages of using an e-mail program are the following :

   **Speed :** E-mail is far quicker than ordinary postage. A message can reach any part of the world in a fraction of a second.

   **Cost :** Nothing is charged for sending and

receiving e-mail messages even though the message travels across the world.

**Content :** You can attach photos, videos or important data along with your message. The message may consists of only a few lines of text to thousands of lines.

**Reliability :** E-mail is the reliable mode of communication. It is more reliable than ordinary postage.

4. To send an e-mail, follow the given steps :

   **Step 1 :** Open any e-mail website, say www.gmail.com and enter your e-mail address and password.

   **Step 2 :** The next screen will be you Inbox. Now click the option 'Compose' on the left side of the account screen. A message screen will appear.

   **Step 3 :** In the To box, type the e-mail address of the person to whom you want to send mail. Write your message in the large empty box.

   **Step 4 :** Click on Send button.

5. **(a)** www.yahoomail.com

   **(b)** www.gmail.com

   **(c)** www.rediffmail.com

6. **URL (Uniform Resource Locator) :** Uniform Resource Locator is the address or location of a website on the Internet. To visit a website, type the URL of the website in the address bar and then press the Enter key. URL of some websites are :

   •    http://www.ncert.nic.in    • http://www.discovery.com

   • http://www.google.com

   **Web Page :** The individual pages which collectively form the World Wide Web are known as Web Pages. These pages contain text, graphics, audio, video and links to other pages.

   These pages may contain text, often underlined and coloured, or a small image, called an icon.

## 10. Introduction to QBasic

*Let's Do Something*

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

B. **1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (F)

**C. 1.** QBASIC is the simplest, interactive high-level programming language. It was developed in Dartmouth College, USA, under the direction of Professors John G. Kemeny and Thomas E. Kurtz, in 1964. Though it was developed as a beginner's language, it has become very popular due to its simplicity.

**2. Numeric Data :** Numeric values on which mathematical operations such as addition, subtraction, multiplication, division, etc. can be performed are called numeric data.

**String Data :** The data that do not perform any mathematical operation except additon (+) but can be used for comparison are called string data.

**3.** Logical operators are used to combine two or more relational expressions to produce a single value which can be either true or false. NOT, AND, OR are the logical operators.

**4. Arithemtic Operators :** An arithmetic operator works on numeric constants and variables and always gives a numeric output.

**Relational Operators :** A relational operator is used to compare the values of two or more constants or variables.

**5.** To save a program in QBASIC, follow the given steps :

**Step 1 :** Select Save option from File menu.

**Step 2 :** The Save dialog box appears. Select the required drive and directory.

**Step 3 :** Type the file name. An extension .BAS will be automatically generated.

**Step 4 :** Click on OK button.

**6.** To open already saved program in QBASIC, follow the given steps :

**Step 1 :** Select Open option from the File menu.

**Step 2 :** The Open dialog box appears. This dialog box shows a list of all the BASIC files of the current directory. Select the required drive, directory and file.

**Step 3 :** Click on OK option.

# Computer–7

## 1. Advancement in Computer Technology

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F), **6.** (T)

**C. 1.** Robotics is the branch of engineering involved in the development and creation of machines capable of doing a given task automatically without any human intervention, once it has been programmed.

**2.** It is the study and design of an intelligent system that understands the environment around it and takes action accordingly. AI aims at simulating a machine like a human brain. Today, this is the most essential part of the technology industry, which provides solutions for the most difficult problems in computer science.

**3.** A rocket launching is the first phase of the flight of a rocket. For launching into interplanetary space, rockets are launched from a launch pad, which is usually a fixed location on the ground. Computers are used at the design stage of the project and in all phases of development right through to the flight control of the rocket.

**4.** On today's generation ATMs, the customer is recognised by inserting a plastic ATM card with a magnetic stripe or a plastic smart card with a chip that contains a unique card number and some security information. Nowadays by using an ATM, customers can access their bank accounts in order to make cash withdrawals and check their account balances as well as purchasing other things.

**5.** Networking management and administration of entire system of banking can be done only because of IT. ATMs are used to manage and process information of the customers which is done because of IT. So, IT is useful in banks.

**6.** An optical computer is a computer that uses light instead of electricity (i.e. photons) to manipulate, store and transmit data. Because of the fundamental different physical properties of photons, the basic principle used in optical

computer is optics, to produce computer with performance and capabilities greater than those of electronic computers. Optical computer technology is still in the early stage.

To replace electronic components with optical ones, an equivalent 'optical transistor' is required. This is achieved using materials with a non-linear refractive index.

## 2. Number System

*Let's Do Something*

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

**B. 1.** A, B, C, D, E, F; **2.** divide; **3.** 0 to 9; **4.** 16; **5.** 0 and carry over 1.

**C. 1.** (T), **2.** (F), **3.** (T), **4.** (F), **5.** (F)

**D. 1.** All through your primary schooling, your teachers must have made you count from 1 to 100, then 101 to 200 and so on. But, your counting must have followed a set pattern. All that you had to do was to learn 10 new symbols, that is 0, 1, 2, 3, 4, 5, 6, 7, 8, 9. Beyond 9, all the numbers were generated by using these 10 symbols in various combination. The system of representing numbers that is used the world over is known as the decimal number system. Thus, number system is the method of counting.

**2.** Number system made up of only two symbols, 0 and 1, is known as the Binary Number System.

When this system is in use, every number is formed using 0 and 1. Since formation of numbers involves the use of these two symbols, the base of the binary number system is said to be 2. The symbols 0 and 1 are known as binary digits or bits in short.

**3.** Number system made up of ten symbols, 0 to 9, is known as Decimal Number System.

When this system is in use, every number is formed using 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. Since formation of numbers involves the use of these ten symbols, the base of decimal number system is said to be 10. The symbols 0 to 9 are known as decimal digits.

**4.** Binary addition is performed in the same manner as decimal addition. Binary number system has only two digits (0,1) and the addition table is given below :

$0 + 0 = 0$

$0 + 1 = 1$

$1 + 0 = 1$

$1 + 1 = 0$ and carry over 1

*Example :* Add $(1000)_2$ and $(101)_2$

```
   1 0 0 0
+    1 0 1
   1 1 0 1        = (1101)_2
```

$(1000)_2 + (101)_2 = (1101)_2$

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

**Step 1 :** Divide the decimal number by 2.

**Step 2 :** Proceed the division with divisor till you get 0 as dividend.

**Step 3 :** Collect all the remainders, i.e. from the first remainder (LSB– Least Significant Bit) to the last remainder (MSB—Most Significant Bit) and put them together to get the binary equivalent.

**Step 4 :** Arrange all the binary digits from MSB to LSB.

**6. Octal Number System :** Number system made up of eight symbols, 0 to 7, is known as the Octal Number System.

When this system is in use, every number is formed using 0, 1, 2, 3, 4, 5, 6 and 7. Since formation of numbers involves the use of these eight symbols, the base of the octal number system is said to be 8. The symbols 0 to 7 are known as octal digits.

**E. 1. (a)**

```
2 | 39
2 | 19   1
2 | 9    1
2 | 4    1
2 | 2    0
  | 1    0
```

$(39)_{10} = (10011)_2$

**(b)**

```
2 | 79
2 | 39   1
2 | 19   1
2 | 9    1
2 | 4    1
2 | 2    0
  | 1    0
```

$(79)_{10} = (1001111)_2$

**(c)**

$$2\,|\,143$$
| 2 | 71 | 1 |
| 2 | 35 | 1 |
| 2 | 17 | 1 |
| 2 | 8 | 1 |
| 2 | 4 | 0 |
| 2 | 2 | 0 |
|  | 1 | 0 |

$$(143)_{10} = (10001111)_2$$

**(d)**

$$2\,|\,49$$
| 2 | 24 | 1 |
| 2 | 12 | 0 |
| 2 | 6 | 0 |
| 2 | 3 | 0 |
| 2 | 1 | 1 |

$$(49)_{10} = (110001)_2$$

**2. (a)** $(1100)_2$

| $2^3$ | $2^2$ | $2^1$ | $2^0$ |
|---|---|---|---|
| 8 | 4 | 2 | 1 |
| 1 | 1 | 0 | 0 |

$$8 + 4 + 0 + 0 = 12$$

$$(1100)_2 = (12)_{10}$$

**(b)** $(10001)_2$

| 1 | 0 | 0 | 0 | 1 |
|---|---|---|---|---|
| 16 | 8 | 4 | 2 | 1 |

$$16 + 0 + 0 + 0 + 1 = 17$$

$$(10001)_2 = (17)_{10}$$

**(c)** $(11111)_2$

| 16 | 8 | 4 | 2 | 1 |
|---|---|---|---|---|
| 1 | 1 | 1 | 1 | 1 |

$$16 + 8 + 4 + 2 + 1 = 31$$

$$(11111)_2 = (31)_{10}$$

**(d)** $(10001)_2$

| 16 | 8 | 4 | 2 | 1 |
|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 1 |

$$16 + 0 + 0 + 2 + 1 = 19$$

$$(10011)_2 = (19)_{10}$$

**3. (a)** 11001
  10101
  = $(101110)_2$

**(b)** 10001
  1110
  = $(11111)_2$

**(c)** 11100
  10011
  = $(101111)_2$

**(d)** 1001
  1111
  = $(11000)_2$

# 3. Advanced Features of PowerPoint

*Let's Do Something*

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

**B. 1.** (F), **2.** (F), **3.** (T), **4.** (F), **5.** (T), **6.** (F)

**C. 1.** Animation is the process where multiple images are displayed rapidly in a sequence such that the images appears to be in motion.

**2.** To add sound or music file in a slide, follow the given steps:

**Step 1 :** Open or navigate the slide on which you want to insert sound file.

**Step 2 :** Select the Insert tab.

**Step 3 :** Click the drop-down arrow on the Sound button in the Media Clips group. A pop-up menu appears on the screen.

**Step 4 :** Select the Sound from File option from the pop-up menu.

**Step 5 :** The Insert Sound dialog box will appear on the screen.

**Step 6 :** Locate the sound file on your computer and click on Open button.

**Step 7 :** Another dialog box named Microsoft Office PowerPoint will appear on the screen displaying the message : 'How do you want the sound to start in the slide show?'

**Step 8 :** Here, you can either click on Automatically or When Clicked button. Automatically option will start the sound automatically as soon as the slide appears in slide show view, while When Clicked option will start the sound only when you click the mouse.

**3.** To insert your own sound in a slide, follow the given steps :

**Step 1 :** Open or navigate the slide on which you want to insert your own sound.

**Step 2 :** Select the Insert tab.

**Step 3 :** Click the drop-down arrow on the Sound button in the Media Clips group. A pop-up menu appears on the screen. Select the Record Sound option from the pop-up menu.

**Step 4 :** The Record Sound dialog box appears. By default, the sound will be named 'Recorded Sound'.

**Step 5 :** Press the red button to record, and square button to stop the recording.

**Step 6 :** After recording of your sound, you can use the play button to listen to the recorded sound.

**Step 7 :** Click on OK button. A small speaker icon will appear on the slide.

4. The steps to print a presentation are :

**Step 1 :** Specify the slides to be printed.

**Step 2 :** Choose number of copies in the Number of copies box.

**Step 3 :** Specify the item that you want to print in Print what option.

**Step 4 :** You can make other changes in your printouts using Handouts option.

**Step 5 :** After making desired changes, click on OK button.

5. Think about a cartoon film. When one scene ends; another scene begins. For example, a scene can fade out into a new scene or the first scene slides off the screen as the second slides in. The way one slide follows the other on the screen is called transition. Such transitions are also available in MS PowerPoint.

6. To add slide transition to a slide, follow the given steps :

**Step 1 :** Click on the desired slide, to which you want to add slide transition effect.

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

**Step 3 :** By default, No Transition is applied to each slide. Click on any transition effect from the Transition to This Slide group.

**Step 4 :** The current slide will display a preview of the selected effect.

**Step 5 :** Select the desired speed from the Transition Speed drop-down list.

**Step 6 :** Click on the Transition Sound drop-down arrow and select any sound effect of your choice.

**Step 7 :** Click on the On Mouse Click checkbox if you want to advance the slide manually by clicking the mouse or click on Automatically After checkbox if you want the slide to advance automatically to the next one.

**Step 8 :** Click on Apply To All button to apply the selected effects on all the slides.

## 4. Formatting Data in MS Excel

***Let's Do Something***

**A. 1.** (b), **2.** (c), **3.** (d), **4.** (a), **5.** (c), **6.** (c)

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F), **6.** (T)

**C. 1.** Alignment refers to the position in which data is placed with in the boundary of a cell.

**2.** The process of determining how data should be presented and how it will appear on a printed page is called formatting. Formatting changes the appearance of data but does not affect the actual cell value.

**3.** To create a number series, follow the given steps :

**Step 1 :** Enter the first two values of the data in the adjacent cells. The first two data values determine the increment value and the starting number of the series.

**Step 2 :** Select the two cells.

**Step 3 :** Click the AutoFill handle (a small black square '    ') in the lower right corner of the selected cells and drag it to enclose the area you want to fill with the number series.

**Step 4 :** Release the mouse button.

**4.** The steps to apply border are as follows :

**Step 1 :** Select the range of cells in the worksheet whose border style you want to change.

**Step 2 :** Click on Border button arrow in the Font group on Home tab and select More Borders option from the list.

**Step 3 :** Format Cells dialog box appears on the screen.

**Step 4 :** Click on the Border tab in Format Cells dialog box.

**Step 5 :** Choose the different options of your choice.

**Step 6 :** Click on the OK button.

**5.** The steps to format numbers are as follows :

**Step 1 :** Select the cell or range of cells whose data you want to format.

**Step 2 :** Click on Number launcher button in

the Number group.

**Step 3 :** The Format Cells dialog box appears with the Number tab as an active tab.

**Step 4 :** Choose the category according to your choice. Under Number, you have the facility to choose the number of decimal places you want, you can decide to use a thousand separator for larger numbers, and you can decide how you want negative numbers to be represented.

**Step 5 :** After choosing options according to your choice, click on OK button.

6. To change pattern and colour of the selected cells, follow the given steps :

**Step 1 :** Select the cell or range of cells.

**Step 2 :** Click on Format button in the Cells group on Home tab. A drop-down list appears on the screen. Click on Format Cells option.

**Step 3 :** Format Cells dialog box appears on the screen with Fill as an active tab.

**Step 4 :** Select a pattern from the Pattern Style drop-down list. The Sample box indicates how the pattern will look with the currently selected colour.

**Step 5 :** You can also change the colour of the pattern. Select the pattern colour from Pattern Color drop-down list.

**Step 6 :** Click on OK button.

## 5. Formulas in MS Excel

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T), **6.** (F)

**C. 1.** The expression which helps you to calculate and analyse the data in your worksheet is known as formula. A formula may contain cell addresses, operators and functions.

    **2.** It is convenient to use cell reference instead of actual data at the time of working with formula. For example, enter the formula '= A1 + A2' instead of '= 100 + 200'.

When you use cell reference and change a number used in a formula, Excel will automatically redo the calculation for you. Let us consider a few examples of reference.

| Cell/Range of Cells | Reference |
|---|---|
| The cell in column B and row 1 | B1 |
| The range of cells in column A and row 5 through 20 | A5 : A20 |
| The range of cells in row 10 and column A through J | A10 : J10 |
| All cells in column H | H : H |
| All cells in row 5 | 5 : 5 |
| All cells in column D through N | D : N |
| The range of cells in column A through D and row 20 through 30 | A20 : D30 |

3. To edit a formula in your worksheet, follow the given steps :

**Step 1 :** Double-click on the cell containing the formula you want to change. The formula appears in the formula bar.

**Step 2 :** Now you can edit the formula in the formula bar. Here, you want to see the addition, so replace the (*) operator with (+) operator.

**Step 3 :** When you finish making the changes to the formula, press the Enter key.

4. Functions are predefined formulas which are used to perform specific calculation.

5. AutoSum feature is used for quickly summing the data values stored in a row or column. This feature can be used by clicking AutoSum button, presented in the Editing group on Home tab.

6. Arranging a given set of data in a particular order is called sorting. This feature allows user to rearrange the given data in a specified order.

7. To sort data in Excel, follow the given steps :

**Step 1 :** Open the worksheet on which you want to perform sort operation.

**Step 2 :** Select any cell in the worksheet and click on Sort button in the Sort & Filter group on Data tab.

**Step 3 :** The entire database will be selected

and the Sort dialog box appears.

**Step 4 :** Select a field, for example, 'AVERAGE' from the Sort by list box.

**Step 5 :** Select the option of your choice in Order list box.

**Step 6 :** By default, **My data has headers** checkbox is selected. If you do not have a header row, you can uncheck this option.

**Step 7 :** Click on OK button to apply sorting in your data.

## 6. Advance Features of MS Excel

*Let's Do Something*

**A. 1.** (d), **2.** (a), **3.** (a), **4.** (c), **5.** (d), **6.** (d)

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T), **5.** (T), **6.** (T)

**C. 1.** A database is a collection of inter–related data which is systematically organized and stored in a computer system. Organized data is easy to access and work with. Data organization is done using a specific data model. The model, widely used these days, is the relational model.

**2.** Sorting feature allows you to view data in different orders, i.e, Ascending or Descending. It is the most powerful feature of MS Excel.

**3.** Filtering is a quick and easy way to extract certain records or rows from a database created in MS Excel. Thus, it allows you to selectively block out data that you don't want to see.

**4.** To add records using form, follow the given steps :

**Step 1 :** Select any cell and click on Form button in the Quick Access Toolbar. The Sheet1 dialog box appears on the screen.

**Step 2 :** Click on New button to add a new record in your database.

**Step 3 :** Here you can type the information for new record.

**Step 4 :** Click on Close button to exit from data form.

**5.** AutoFilter and Advanced Filter.

**6.** Conditional formatting means highlighting or emphasizing selected cells on the basic of a criteria. It allows you to set rules on how the cells should be formatted.

**7.** Data validation is used to restrict the cell entries within a specified range.

**8.** Follow the given steps to sort data :

**Step 1 :** Enter the data in the worksheet.

**Step 2 :** Select any cell in the data list.

**Step 3 :** Click on Sort button in the Sort & Filter group on Data tab. The entire database will get selected.

**Step 4 :** The Sort dialog box appears. MS Excel usually assumes that you have a header row, i.e., first row of the data source, which is the title or heading for the selected data and the corresponding option is already selected. If you do not have a header row, you can uncheck the option **My data has headers**.

**Step 5 :** Select a field : For example, 'TOTAL' from the Sort by list box.

**Step 6 :** Select the Largest to Smallest option in Order list box. By default, the Smallest to Largest option is selected.

**Step 7 :** The sorted data appears.

## 7. QBASIC Statements

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (F)

**C. 1.** The INPUT statement allows the user to enter the value when the program is running. This command will print and wait for the user to enter the value and then assign this value to a variable. It is used like this :

Syntax : INPUT <Numeric or string variable name>

**2.** REM statement is used to give remarks in a program.

**3.** PRINT command is the output statement that is used to display the output on the computer screen.

Example    PRINT "HI"

HI will be displayed on the output screen.

**4.** Output statement is used to display the output on the computer screen.

**5.** Do yourself.

# 8. QBASIC : Operators and Looping Statements

*Let's Do Something*

**A. 1.** (c), **2.** (b), **3.** (d), **4.** (a), **5.** (d), **6.** (b)

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (T), **5.** (F)

**C. 1.** Relational operators are used to perform a comparison between two values. The result of the comparison is either true or false.

Logical operators are used to either concatenate or reverse condition. Logical operators are useful when you need to check multiple conditions.

**2.** Looping means repeated execution of a statement or a set of statements. A loop is said to be a set of instructions that are executed more than once in a program.

**3.** STEP clause in FOR-NEXT is used to change the increment value.

**4.** The three ways to execute loops in QBASIC are :

FOR...NEXT, DO.....LOOP, WHILE......WEND.

**5. WHILE......WEND LOOP**

Sometimes, a loop has to be executed repeatedly while a given condition remains true. In such cases, W H I L E . . . . . . . . W E N D statement is used.

```
Syntax :WHILE condition
  {
  Statement(s)
  }
  WEND
```

**6. FOR ...... NEXT LOOP**

FOR...... NEXT is an iterative statement. It is a fixed loop. It facilitates repeated execution of some QBASIC statements, a set number of times. It provides an easy way to create a loop.

Syntax : FOR <control variable> = <initial value> TO <final value>

{statement}

NEXT <control variable>

# 9. QBASIC : Sound and Graphics

*Let's Do Something*

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

**B. 1.** (F), **2.** (F), **3.** (T), **4.** (T), **5.** (T), **6.** (F)

**C. 1.** Screen statement is used for selecting an appropriate screen mode for creating graphics in QBASIC. Its syntax is as follows :

Syntax : SCREEN [Screen mode number]

**2.** Line statement is used to draw a triangle in QBASIC.

Example :

SCREEN 7

COLOR 15, 10

CLS

PRINT "A Triangle Using Line Statement"

LINE (160, 30) — (250, 180), 2

LINE (250, 180) — (70, 180), 2

LINE (70, 180) — (160, 30), 2

END

**3.** BEEP and PLAY statements enables us to play music.

**4.** LINE statement is used to draw a straight line between two points on the screen while CIRCLE statement is used to draw a circle, ellipse or arc of a circle.

**5.** To draw a circle in QBASIC, we use CIRCLE statement.

Syntax : CIRCLE (x, y), r, p

Here, the co-ordinates x and y specify the centre location of a circle on the screen, 'r' gives the value of the radius and 'p' specifies the colour code.

**6.** Sixteen (16) colours can be used in background or foreground in QBASIC.

# 10. Computer Virus

*Let's Do Something*

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

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T), **5.** (T)

**C. 1.** A computer virus is a destructive software created to harm a computer and damage its contents.

## 2. Trojan Horse

A Trojan Horse is a malware, that is, a malicious software. It seems to perform a useful function, but actually performs destructive functions such as destroying the data stored in the computer, allowing an outsider illegal access to the system, etc. A Trojan horse usually does not replicate itself. Some well-known Trojans are Nuclear RAT, Bitfrost, Zlop, Mocmex, Beast, etc.

### Worm

A Worm is a computer program that replicates itself very fast and disturbs entire network. It enters to a computer system through infected e-mails, reproduces itself, sends copies of itself to other computers through a network and chokes the network. It also causes permanent loss of data. Some Worms that have brought networks down are Happy 99, Code Red, Nimda, Storm, etc.

3. An antivirus software is a software designed to protect a system from viruses. In order to be effective, it must be run in the background at all times. Antivirus software must be updated on a regular basis to ensure that the latest viruses are also covered.

4. Program Virus, Boot Sector Virus, Macro Virus.

5. • Frequent hanging of the system.

   • Displaying a change in data against the filename in the directory, when a virus modifies the file.

   • Deleting or damaging files.

6. Spyware is a type of Malware that is installed on computers and collects information about users without their knowledge. Spyware programs secretly monitor the user's computing. They can collect various types of personal information such as internet surfing habits, visited web pages, and transmits that information in the background to someone else. Sometimes, they also change computer-setting that results in slow connection speed and wrong functionality of other programs. Spyware can also collect information about e-mail addresses, passwords and even credit card numbers.

# Computer–8

## 1. Computer Networking

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (F), **6.** (T)

**C. 1.** A computer network is a collection of computers and the relected devices connected using certain communication channels. These networks allow users to share the resources with other computers and also communicate between different machines.

**2. Reliability :** Since multiple copies of important files can be maintained and transferred between systems, the network ensures that any critical task does not come to a standstill or data is not lost if a machine stops working.

**Redundancy :** Computer networks reduce the need for hard copies of all documents. By sharing files over the network, the need to share paper copies of reports or any other information can be eliminated or greatly reduced.

**Scalability :** Adding more and more computers to an existing network is not a cumbersome process. It just takes a few minutes. Similarly, the entire network does not collapse if just one client computer stops working.

**3. LAN :** LAN stands for Local Area Network. The LAN spans across a limited geographical area like a computer lab, office building, residential apartment or school and connects computers and devices in that area. Wired LANs use ethernet technology, phone lines, coaxial cables or power lines to connect the computers. Your computer lab is a classic example of LAN.

**WAN :** WAN stands for Wide Area Network. It is a kind of network that covers large geographical area across the countries or continents. In WAN, two or more computers located at far away places are connected to each other for communication.

**4.** A network topology is how computers, printers

and other devices are connected in a particular arrangement. It describes the layout of wires, devices and routing paths. It defines the arrangement patterns in which the terminals or nodes are connected with each other.

5. **The Network Interface Card :** A NIC is the computer's gateway to the network. It attaches the computer to the network allowing it to communicate with the other computers on the network.

   **Modem :** A device which is needed to translate between the analog phone line and digital computer, is called a modem. Modems are formally known as modulators demodulators. It modulates a digital signal from the computer into an analog one to send data out over the phone line.

6. **Star Topology :** One of the most popular topologies for Ethernet LANs is the star. It is easy to set up and it is relatively cheap. The star topology works by connecting each node to a central device. This central connection allows us to have a fully functioning network even when other devices fail. The only real threat to this topology is that if the central device goes down, the entire network goes down. Star topology is better suited for small networks.

   **Ring Topology :** In local area networks where the ring topology is used, each computer is connected to the network in a closed loop or ring. The signal passes through each machine or computer connected to the ring in one direction only. There is no central node in this pattern of topology. The disadvantage of this topology is even if one node fails, the whole network stops working.

## 2. More on Number System

*Let's Do Something*

**A. 1.** (c), **2.** (a), **3.** (d), **4.** (c)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (T), **5.** (F), **6.** (F)

**C. 1.** Octal number system is made up of eight symbols, 0 to 7. When this system is in use, every number is formed using 0, 1, 2, 3, 4, 5, 6 and 7. Since formation of numbers involves the use of these eight symbols. The symbols 0 to 7

are known as Octal Digits.

2. To convert an octal number into a binary number, follow the given steps :

   **Step 1 :** Convert every octal digit into its equivalent of 3 binary digits.

   **Step 2 :** Combine all binary digits and make a group.

3. Hexadecimal number system is made up of sixteen symbols, 0 to 9 and A to F. When this system is in use, every number is formed using 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F. Since formation of numbers involves the use of these sixteen symbols, the base of the hexadecimal number system is said to be 16. The symbols 0 to 9 and A to F are known as Hexadecimal Digits.

4. To convert a binary number into a hexadecimal number, follow the given steps :

   **Step 1 :** Bunch binary digits into groups of four starting from the rightmost digit.

   **Step 2 :** If the leftover binary digits do not add up to four, add 0s to the left.

   **Step 3 :** Convert every set of four binary digits into its equivalent hexadecimal digit.

5. To convert a decimal number into a hexadecimal number, follow the given steps :

   **Step 1 :** Divide the decimal number by 16. Note down the quotient and the remainder.

   **Step 2 :** Divide the quotient obtained by 16 and note down the resulting quotient and remainder.

   **Step 3 :** Repeat the procedure till you reach a quotient less than 16.

   **Step 4 :** List all the remainders moving from bottom to top.

**D. 1. (a)** $(100111010)_2$

| 100 | 111 | 010 |
|-----|-----|-----|
| 4 | 7 | 2 |

= $(472)_8$

**(b)** $(101111101)_2$

| 101 | 111 | 101 |
|-----|-----|-----|
| 5 | 7 | 5 |

= $(575)_8$

**(c)** $(11100010011)_2$

| 011 | 100 | 010 | 011 |
|-----|-----|-----|-----|
| 3 | 4 | 2 | 3 |

= $(3423)_8$

**(d)** $(1110011)_2$

| 001 | 110 | 011 |
|-----|-----|-----|
| 1 | 6 | 3 |

= $(163)_8$

**2. (a)** $(526)_8$

    5      2      6

   $8^2 \times 5$  $8^1 \times 2$  $8^0 \times 6$

   $320 + 16 + 6$

   $= (344)_{10}$

**(b)** $(6773)_8$

   6     7     7     3

   $8^3 \times 6$  $8^2 \times 7$  $8^1 \times 7$  $8^0 \times 3$

   $3072 + 448 + 56 + 3$

   $= (3579)_{10}$

**(c)** $(1243)_8$

   1     2     4     3

   $8^3 \times 1$  $8^2 \times 2$  $8^1 \times 4$  $8^0 \times 3$

   $512 + 128 + 32 + 3$

   $= (675)_{10}$

**(d)** $(54)_8$

   5     4

   $8^1 \times 4$  $8^0 \times 4$

   $32 + 4$

   $= (36)_{10}$

**3. (a)** $(001111001001)_2$

   0011  1100  1001

    3     12    9

    3     C     9

   $= (3C9)_{16}$

**(b)** $(110010101111001)_2$

   0110  0101  0111  1001

    6     5     7     9

   $= (6579)_{16}$

**(c)** $(1011110110)_2$

   0010  1111  0110

    2     15    6

    2     F     6

   $= (2F6)_{16}$

**(d)** $(11100011101)_2$

   0111  0001  1101

    7     1     13

    7     1     D

   $= (71D)_{16}$

**4. (a)** $(12FC)_{16}$

   1     2     F     C

   0001  0010  1111  1100

   $= (0001001011111100)_2$

**(b)** $(643A2)_{16}$

   6    4    3    A    2

   0110 0100 0011 1010 0010

   $= (01100100001110100010)_2$

**(c)** $(15FA)_{16}$

   1    5    F    A

   0001 0101 1111 1010

   $= (0001010111111010)_2$

**(d)** $(A36C)_{16}$

   A    3    6    C

   1010  0011  0110  1100

   $= (1010001101101100)_2$

**5. (a)** $(687)_{10}$

   16 | 687

   16 | 42   $15 \rightarrow F$

   16 | 2    $10 \rightarrow A \uparrow$

      | 0    $2 \rightarrow 2$

   $= (2AF)_{16}$

**(b)** $(796)_{10}$

   16 | 796

   16 | 49   $12 \rightarrow C$

   16 | 3     $1 \rightarrow 1 \uparrow$

    0 | 0    $3 \rightarrow 3$

   $= (31C)_{16}$

**(c)** $(4991)_{10}$

   16 | 4991

   16 | 311  $15 \rightarrow F$

   16 | 19   $7 \rightarrow 7 \uparrow$

   16 | 1    $3 \rightarrow 3$

      | 0    $1 \rightarrow 1$

   $= (137F)_{16}$

**(d)** $(2690)_{10}$

   16 | 2690

   16 | 168   $2 \rightarrow 2$

   16 | 10    $8 \rightarrow 8 \uparrow$

   16 | 0     $10 \rightarrow A$

   $= (A82)_{16}$

# 3. Creating Charts in MS Excel

*Let's Do Something*

**A. 1.** (d), **2.** (c), **3.** (a), **4.** (a), **5.** (c)

**B. 1.** (F), **2.** (F), **3.** (F), **4.** (T), **5.** (T), **6.** (F)

**C. 1.** A chart is a pictorial representation of data. Chart is an effective way to display data in pictorial representation of selected worksheet information.

**2.** MS Excel supports various types of charts. Some of them are Column Chart, Bar Chart, Line Chart, Pie Chart, Scatter Chart, Area Chart, Radar Chart, etc.

**3. Bar Chart :** This chart illustrates comparison among individual items. Categories are organized vertically, values horizontally, to focus on comparing the values and to place less emphasize on time. This is a chart with horizontal bars.

**Radar Chart :** In radar chart, each data series has its own value axis from the center point. There is a line which connects the value in the same data series.

**4.** Data Points, Data Series, Chart Title, Data Labels, Legend.

**5. Data Points :** The graphs are based on the values of the worksheet. The values are known as data points. **Data Series :** The set of many data entries, which comes from the same row or column in a worksheet, is called data series.

**6.** To create a chart, follow the given steps :

**Step 1 :** Create a new worksheet with the data.

**Step 2 :** Select all the cells that will be in the chart including headers.

**Step 3 :** Click on the Insert tab.

**Step 4 :** Click on any chart type in the Charts group on Insert tab, say Column and select the chart sub-type from the displayed choices.

**Step 5 :** The chart appears on the worksheet. A new category named as Chart Tools appears on the Title bar.

**Step 6 :** Select the desired layout from the Chart Layouts group on the Design tab and observe the change.

**Step 7 :** Go to Chart Styles group and click on the desired style. Observe the change in your chart. All the data labels, legend details, mentioned in the selected data range will be displayed in the chart.

**Step 8 :** You can also change the data range of your chart after creating it. To change the data range, right click on chart and click on Select Data from the shortcut menu. The Select Data Source dialog box appears.

**Step 9 :** Make changes according to your choice and click on OK button.

# 4. MS Access : An Introduction

*Let's Do Something*

**A. 1.** (a), **2.** (b), **3.** (a), **4.** (c), **5.** (b), **6.** (a)

**B. 1.** (T), **2.** (F), **3.** (F), **4.** (T), **5.** (T), **6.** (F)

**C. 1.** A database is a systematic collection of interrelated data that is organized and stored in a computer system.

**2.** Database management systems have the following advantages which encourage people to use them to generate and maintain databases :

**DBMS Reduces Duplication of Data :** A DBMS stores data at a central location and minimizes data redundancy, that is, duplication of data.

**DBMS Removes Inconsistencies :** When the same data is stored at multiple places, they may fail to match. A DBMS stores data at a central location. Thus, it eliminates data inconsistencies by eliminating duplication of data.

**DBMS Facilitates Data Sharing :** A DBMS stores data at a central location and makes data available to more than one user at the same time.

**DBMS Ensures Data Security :** A DBMS stores data at a central location and prevents unauthorized access and manipulation of the data. Thus, DBMS makes data secure.

**DBMS Ensures Data Integrity :** A DBMS places restrictions on the data entered in specific fields and ensures that only valid data is stored. Thus, DBMS gurantees data integrity.

**3. Field :** Each column of information in a table

is referred to as a field. It stores a particular category of information. For example, the column titled 'NAME' is a field that stores the names of students in a class. So, the information stored in a column is called field.

**Record :** Number of fields make one record. Each row of information is called a record. For example, Student's Roll No., Name, Age and Address indicate one record of a student.

4. To create a blank database, follow the given steps :

   **Step 1 :** Open MS Access by clicking on Start > All Programs > Microsoft Office > Microsoft Office Access 2007.

   **Step 2 :** MS Access opens with the 'Getting Started with Microsoft Office Access' window.

   **Step 3 :** Select Blank Database template in the New Blank Database section.

   **Step 4 :** A Blank Database task pane appears on the right side of the window that prompts you to create a file.

   **Step 5 :** Specify the file name say, Students_Records, in the File Name text box.

   **Step 6 :** Change the path from the Browse button next to the File Name text box, if required.

   **Step 7 :** Click on Create button. The database will be created and the name of the database will be displayed on the Title bar.

5. MS Access is a software designed by Microsoft for creation and maintenance of databases. It is based on the relational database model. Hence, it is known as a relational database management system.

6. The steps to open an already existing database are :

   **Step 1 :** Select Open option of Office Button drop-down menu.

   **Step 2 :** The Open window appears.

   **Step 3 :** Choose the location of the file.

   **Step 4 :** To open the desired file, double click on the file name in the window or select the file and click on the Open button.

# 5. MS Access : Tables

*Let's Do Something*

**A. 1.** (c), **2.** (b), **3.** (b), **4.** (d), **5.** (c), **6.** (c)

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (T), **5.** (F), **6.** (T)

**C. 1.** A table is the combination of rows and columns. It is the fundamental building block of any database.

   **2.** The steps to create a table in design view are as under :

   **Step 1 :** Open the database in which you want to create a table.

   **Step 2 :** In Database window, select Create tab and click on Table Design button in the Tables group. The Table Design View window appears.

   **Step 3 :** Here you can create whatever fields you like and select the data types for each field.

   The Table Design View window consists of two areas :

   (a) The field grid pane, and

   (b) The field properties pane.

   **The field grid pane** allows us to give the field names and specify the data type. Some description with each field could also be given, though this is optional.

   **The field properties pane** allows us to enter more details for each field like size, validation rule, etc.

   **Step 4 :** Enter the first field name in Field Name column. Press the Tab key to move to Data Type column and select the suitable data type for its respective field.

   **Step 5 :** Press the Tab key to move to the Description column. In this column, you can give any comment related to the field, This is an optional step.

   **Step 6 :** Press the Tab key again and the cursor will move to the Field Name column in next row.

   **Step 7 :** Repeat this procedure until you have created all of your fields.

   **Step 8 :** After creating all your fields, press 'Ctrl + S' key combination to save your file.

**Step 9 :** The Save As dialog box appears. Type the Table Name and click on OK button.

**Step 10 :** A new dialog box appears prompting you to create a primary key.

**Step 11 :** Click on No button.

3. In datasheet view, we enter the actual data i.e., the records.

4. Design view allows more control over the table structure.

5. To set primary key in a table, follow the given steps :

**Step 1 :** Select the field to be used as primary key.

**Step 2 :** Click on the Primary Key button present in the Tools group on Design tab.

6. Only text and number data type field size can be changed; all other data types have the predefined size. For text, change the Field Size property option by increasing or decreasing the number of characters. In numeric field, change the General tab to any other in the properties pane.

7. To delete a field, follow the given steps :

**Step 1 :** Double-click on the table to open it and click on View button on Datasheet tab. Select Design View option from the drop-down menu.

**Step 2 :** Select the field to be deleted by clicking on the field selector.

**Step 3 :** Click on Delete Rows button in the Tools group on Design tab.

## 6. Artificial Intelligence

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (F), **6.** (T)

**C. 1.** Artificial intelligence or AI is the intelligence of machines and the branch of computer science that aims to create it. In other words, it is the area of computer science focusing on creating machines that can behave in a way that human consider intelligent.

**2. Information Processing Language (IPL) :** IPL was the first language developed for AI. Its features support programs that perform general problem solving, dynamic memory allocation, data types and co-operative multitasking.

**STRIPS :** It is a language for expressing automated action sequences that can be followed by robots and other such machines. The program expresses a set of actions to be performed to attain a certain goal. For each action pre-conditions and post-conditions are specified.

3. Fuzzy logic controllers have been developed for automatic gear-boxes in automobiles. This uses a method where the drivers of the automobiles need not bother about shifting the gears while driving. The program will take care of that and will do gears shifting automatically. Thus Artificial Intelligence is useful in transportation.

4. Robots are preferred in certain industries than human bacause, when human are assigned repetitive jobs, they can cause accidents or make mistakes due to lapse of concentration. Robots have proven as an effective replacement for humans in these kinds of jobs. They neither lose not make concentration mistakes.

5. AI helps in combat and training simulators. It is widely used to train air traffic controllers. With speech recognition software in AI, the air traffic controllers are giving directions to the artificial pilots. AI-supported software helps in creating conceptual designs for aircrafts. NASA created a software that could enable a damaged aircraft to fly until it finds a safe landing place.

6. AI has been used successfully in fields like medical diagnosis, stock trading, robot control, finance, transportation, etc.

## 7. Introduction to HTML

*Let's Do Something*

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

**B. 1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (T), **6.** (T)

**C. 1.** HTML is an acronym for Hyper Text Markup Language. It is the language of the World Wide Web. It is the computer language used to create hyper text documents. Hyper text documents are the documents that have hyperlinks. These

hyperlinks connect documents at different locations simply by clicking on hyperlinks. There is no set order of doing things. The movement from one document to another is hyper and not linear.

2. HTML is the most popular language for designing web pages and websites. HTML has the following features :

- It is easy to learn and master.

- It allows text, images and videos to be displayed on a web page.

- It determines how a web page with text, images and videos appears on the web browser. It delivers the contents to multiple platforms.

3. (i) **Container Tags :** Container tags require an opening or ON tag and closing or OFF tag.

OFF tags are written within the angular brackets, but using a slash before the command.

For example : &lt;title&gt;   HTML  &lt;/title&gt;
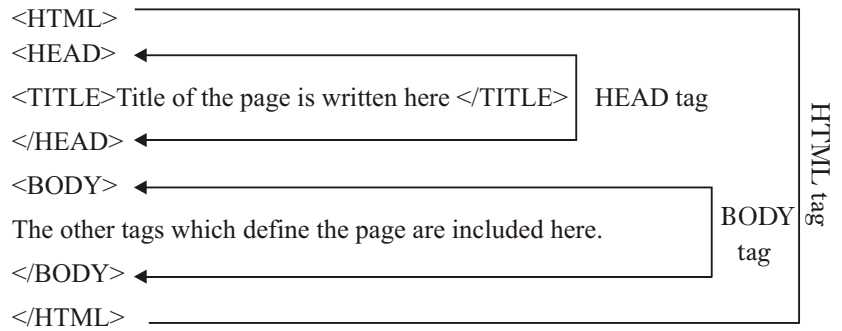
           ON tag    text    OFF tag

(ii) **Empty Tags :** Empty tags have only a starting tag. For example, &lt;BR&gt; tag is used to break a line in a web page. There is no closing tag for &lt;BR&gt;. Similarly, &lt;IMG&gt; tag inserts an image.

4. Each HTML file begins with &lt;HTML&gt; tag and ends with &lt;/HTML&gt; tag. These are called the markers for the browser to identify the spots where the document starts and ends. Within these tags, HTML file is divided in two sections :

**HEAD :** The HEAD section contains information about the document that is not displayed on the web page.

**BODY :** The BODY section contains everything that is displayed on the web page. It includes text, graphics, etc.

So, the basic structure of an HTML page is :

```
<HTML>
<HEAD>
<TITLE>Title of the page is written here </TITLE>     HEAD tag
</HEAD>
<BODY>
The other tags which define the page are included here.     BODY tag
</BODY>
</HTML>
```

5. To view an HTML document, follow these steps :

**Step 1 :** Open Internet Explorer or any other web browser.

**Step 2 :** Press Ctrl + O key combination. The Open dialog box will appear. Click on the Browse button. A dialog box will appear.

**Step 3 :** Choose the path where you have stored your HTML document and select your file. Click on Open button.

6. The HEAD tag contains information about the document, including its title, scripts used, style definitions, document description and links to pages that could be pre-loaded. This tag is nested within the HTML tag.

## 8. Tags in HTML

*Let's Do Something*

A. **1.** (b), **2.** (a), **3.** (c), **4.** (a), **5.** (d), **6.** (c)

B. **1.** (T), **2.** (T), **3.** (T), **4.** (F), **5.** (F), **6.** (F)

C. **1.** A web page is made up of different elements each of which is defined by HTML code or tag. An HTML tag always begins with a less than sign '&lt;' and ends with a greater than '&gt;' sign. For example, the tag that makes text bold is B. It is tagged as &lt;B&gt; within the text. This tag is written before the text you want to bold. This is called opening tag or ON tag. In order to end the bold effect, you have to use a closing or an OFF tag.

**2.** IMG tag is an empty tag that is used to insert an image in a web page. The value that it takes is the location of the file containing the image.

Syntax : &lt;IMG SRC = "Location of the image"&gt;

Any text placed between the comment tags will be ignored by the browser. It helps in editing or

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viewing the HTML code of a web page. It is a useful tag for programmers.

Syntax : <COMMENT> .......... </COMMENT>

**3.** SIZE, WIDTH and COLOR are the three attributes used with horizontal rule tag.

**4.** Bold tag is used to give the **Bold** effect to the text. It is a container element.

Syntax :  <B>The text is bold </B>

Italic tag is used to give the *Italic* effect to the text. It is a container element.

Syntax :  <I>The text is italic </I>

**5.** The browser does not recognize formatting. If you want to start a new line, you need to insert a line break <BR> tag. This tag has no end tag.

Syntax : <BR>

<HR> tag is used to display a horizontal line across the web page. It is an empty element that has no end tag.

Syntax :   <HR>

**6.** Some of the attributes of body tag are :

**BGCOLOR :** BGCOLOR attribute is used to change the background colour of a web page. You can use the BGCOLOR attribute like this :

Syntax : <BODY BGCOLOR="Green">

**TEXT :** TEXT attribute is used to set the colour of the text in the document. You can use TEXT attribute like this :

Syntax :  <BODY TEXT = "White">

**TOPMARGIN :** This attribute is used to set the top margin of a web page. It is given within the  tag with any value such as 60. This will display the text 60 pixels away from the top of the page.

Syntax :  <BODY TOPMARGIN=60>

**LEFTMARGIN :** This attribute is used to set the left margin of a web page. The value of left margin accordingly keeps the text away from the left corner of a page.

Syntax :  <BODY  LEFTMARGIN = 50>

## 9. Creating Lists and Tables in HTML

*Let's Do Something*

**A. 1.** (a), **2.** (d), **3.** (c), **4.** (d), **5.** (a)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T), **6.** (T)

**C. 1.** Different types of list can be created in an HTML document. They are :

1. Unordered List

2. Ordered List

3. Definition List.

**Unordered List <UL> Tag**

Unordered list or bulleted list is used when the items in the list are not required to be in a specific order. An unordered list is enclosed within the  <UL>..........</UL> tags. Each item in the list is given with the help of <LI> tag. The 'TYPE' attribute of the <UL> tag allows you to specify the type of bullets you want for the list items. This attribute can take three values : Disc, Square and Circle to produce dark circle bullets, square bullets, and white circle bullets before the list items, respectively.

**Ordered List <OL> Tag**

An ordered list is a list where the items are in a specific order and need to be numbered. This kind of list could be used to give a list of items or to number the steps in a procedure. An ordered list is enclosed within the <OL>..........</OL> tags. Each item in the list is given here also with the help of <LI> tag.

Syntax :  <OL  START = 'Value' TYPE = '1' / 'A' / 'a' / 'I' / 'i'>

**Definition List Tag**

A definition list tag is used to build a list of items, where each item has some block of text acting as a definition.

**2.** <TR> tag defines a horizontal row of cells while <TD> tag specifies an individual block or cell in a table row.

**3.** To create a hyperlink, <A> tag is used. The HREF attribute of the <A> tag stores the reference of the document that is to be linked. The text that appears on the hyperlink is enclosed between the starting tag <A>  and ending tag </A>.

Syntax : <A HREF = "Document Name"> Hyperlink Text </A>

**4.**  Cellpadding lets you define the distance between a cell boundary and its contents while

cellspacing lets you add space between cells.

**5.** Do yourself.

**6.** HTML allows you to nest a list within another list. The list that lies within another list is called a nested list. The browser automatically uses different bullets or numbering systems for the next level of indentation for the nested list. You can nest an ordered list within an unordered list and vice versa.

The following HTML coding shows you how the nesting of lists works :

```
<HTML>
<HEAD>
<TITLE> Creating Nested List </TITLE>
</HEAD>
<BODY>
<CENTER>      Versions      of      software
</CENTER>
<UL Type = 'SQUARE'>
<LI>Microsoft OFFICE
<OL TYPE = '1'>
<LI>MS WORD
<LI>MS POWERPOINT
<LI>MS EXCEL
<LI>MS ACCESS
</OL>
</UL>
<UL>Type = 'CIRCLE'>
<LI> OPERATING SYSTEM
<OLType = '1'>
<LI>WINDOWS 95
<LI>WINDOWS 98
<LI>WINDOWS XP
<LI>WINDOWS 7
</OL>
</UL>
</BODY>
</HTML>
```

# 10. Introducing Flash

*Let's Do Something*

**A. 1.** (a), **2.** (b), **3.** (d), **4.** (b), **5.** (c), **6.** (d)

**B. 1.** (T), **2.** (T), **3.** (F), **4.** (F), **5.** (T)

**C. 1.** Flash is a powerful animation software package developed by Macromedia. Flash provides a versatile and easy way to create animation that consists of images, sound and video with various effects. Flash is extremely useful for developing highly interactive websites, online advertisements, computer games and contents for various mobile devices.

**2.** The Property Inspector is a panel that displays the properties of the selected object. The list of properties also vary in the Property Inspector.

**3.** Different components of a flash window are : Toolbox, Timeline, Panels, Layer Window, Stage and Property Inspector.

**4.** Brush tool has the following 3 options :

**Brush Mode Modifier :** On clicking, a drop-down menu appears, which provides 5 modes for applying strokes.

**Brush Size :** Clicking this, displays a drop-down menu which provides a range of preset available brush sizes.

**Brush Shape :** Clicking this, displays a drop-down menu with all possible shapes— circle, square, rectangle, etc.

**5.** The steps to draw with pencil tool are :

**Step 1 :** Select the Pencil Tool.

**Step 2 :** In the Property Inspector, select stroke colour, line thickness and style.

**Step 3 :** Select a drawing mode such as Straighten, Smooth, Ink under Options in the Tools Panel.

**Step 4 :** Click on the stage and drag to draw lines.

**6.** Line tool is used to draw straight lines in flash.

## 11. Internet Services and E–commerce

*Let's Do Something*

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

**B. 1.** (F), **2.** (T), **3.** (T), **4.** (T), **5.** (T), **6.** (F)

**C. 1.** Internet, especially the world wide web part of

it, is a storehouse of huge amount of information on virtually any conceivable topic of public interest. Thus, Internet has made it easier to access and share information, which can be in the form of text, pictures, audio, or video. To extract information from the internet is called information retrieval.

2. For video conferencing, we need a PC with internet connectivity, a digital camera properly configured and connected to PC and a video conferencing software such as Microsoft Net Meeting.

3. Searching for information on the internet or simply exploring the internet is commonly referred to as surfing.

4. Three ways are :
   • Finding information using search engine
   • Finding people on the internet
   • Education through internet

5. E–commerce refers to the buying and selling of things over the internet. These days, a large numbers of companies and business organizations have set up their own websites providing details of their products and services and how to buy them. You can visit these sites and buy virtually anything on the internet.

6. **Business-to-Business :** This mode refers to a company selling or buying products or services from other companies.

   **Consumer-to-Consumer :** Consumer-to-Consumer e commerce refers to auction sites where individual consumers put up items and other individual consumers bid for it. For example : ebay, yahoo auction, etc.

7. Digital Middlemen refers to a company which provides information about several companies on a single website. These companies collects information from other companies about the same type of products (bikes, computer hardware, cars, etc), or services (travel and tourism, etc). A commission is charged for every sale or purchase by the company hosting the website.

# iT MATRIX

## Teacher's Learning Materials