



# TECHNO CLONE



*(Teacher Manual)*



**Class 6 to 8**

# Techno Clone - 6

## Chapter - 1 — Review of Computer Basics

- A. 1. (d) Plotter                      2. (d) All of these                      3. (a) Input device  
4. (d) Joystick                      5. (b) Trackball
- B. 1. Pointing device                      2. Dot matrix printer                      3. Input  
4. CPU                      5. Laser printer                      6. hardware
- C. 1. (iv) CPU                      2. (vi) Scanner                      3. (v) Monitor  
4. (i) Soft copy                      5. (iii) Trackball                      6. (ii) Printer
- D. 1. Visual Display Unit  
2. Magnetic Ink Character Recognition  
3. Optical Character Recognition                      4. Liquid Crystal Display
- E. 1. Joystick                      2. Laser printer                      3. Barcode Reader  
4. Keyboard                      5. Monitor                      6. Speaker
- F.1. 1. Keyboard                      2. Mouse                      3. Light Pen
2. (i) (a) The parts of a computer which can be seen and touched are called hardware.  
(b) The hardware parts can be of two types- External and Internal  
(ii) (a) The instructions given to the computer to get desired results are called Software.  
(b) Computer cannot perform its task without software.
3. The Central Processing Unit (CPU) stores data, performs calculation, processes data and sends the result to output devices. It is the brain of the computer and also called the system unit. It controls all input and output devices.
4. A Scanner is used to read images and texts and transfer them to the computer. These images can be seen on the screen.
5. It is used to print designs of high quality graphics in different types of colours. They are used by engineers, architects etc., to produce 3D effects in their designs or pictures.
6. MICR technique is used mainly in banks because magnetic ink characters are difficult to forge.

### Activity – 3

- a. Hand-held barcode reader                      b. Joystick  
c. Flatbed scanner                      d. CPU                      e. Inkjet Printer                      f. Microphone

### Brain Twisters

1. Output devices allow users to better interact with computer equipment. They convert data signals into things that people can better understand, such as images and sounds. Users can utilize these devices to manipulate data into the most appropriate form for a given situation.
2. CPU is called the brain of the computer because it controls all input and output devices.

## Chapter - 2 — Computer Software & Language

- A. 1. (b) Assembly      2. (d) All of these      3. (c) Interpreter  
 4. (b) Device management      5. (c) MS Power point
- B. 1. Interpreter      2. High Level Language (The 3rd Generation)  
 3. 0 means **off** and 1 means **on**  
 4. Programming      5. System Software
- C. 1. True      2. False      3. True      4. True      5. False
- D. 1. V MS Windows      2. IV MS Powerpoint  
 3. I Enables creation of copy of data  
 4. II Protects from virus infection  
 5. III Machine independent
- E.1. • Simple and user friendly language.  
 • Language that is machine independent.
2. • Interpreter translates high-level language source code into machine language whereas compiler compiles instructions written in the high-level programming language into a machine language.  
 • An interpreter translates each line of the program one by one whereas compiler scans whole data at once.  
 • Interpreter faster than compiler
3. It is known as the first generation. It is the only language that a computer understands. It is expressed in binary form i.e., 0 means 'Off' and 1 means 'On' state.

4.

Machine language	Assembly language
1. uses binary codes to depict operators and data	1. uses Mnemonic codes or symbols in place of binary numbers
2. Machine-dependend and directly understand by a computer	2. Machine-dependend but has to be converted into Machine language by Translator programs.

5. It manages computer's hardware and software resources. It acts as a link between the software and the hardware. It controls and keeps a record of the execution of all other programs. Exp. Microsoft Windows, Linus and UNIX.

### Brain Twisters

We need operating system because it controls and keeps a record of the execution of all other programs that are present in the computer, including application programs and other system software.

## Chapter - 3 — Working in Windows

- A. 1. (b) Keyboard      2. (c) Extra-large icons  
 3. (b) List view      4. (a) Explorer

(2) — Techno Clone

- B. 1. T            2. T            3. F            4. F            5. T
- C. 1. Windows    2. Configuration    3. Appearance  
4. Windows Explorer
- D.1. Windows Explorer is the main tool that you use to interact with windows 10, you need to use the windows Explorer to view, explore or organize libraries, files and folders.
2. 1. Extra Large Icons - It displays extra-large size icons of the files and folders.  
2. Large Icons - It displays files and folders as large size icons.  
3. Medium Icons - It displays file and folders as medium icons.  
4. Small Icons - It displays file and folders as small icons.  
5. List - It displays the content as a list of files and folders.  
6. Details - Detailed information of files and folders.  
7. Tiles - Medium size icons along with basic information.  
8. Content - on a seperate row with details.
3. 1. It is easy to use and learn, faster more reliable and secure.  
2. You can redecorate your desktop with new themes, slide shows or handy gadgets.  
3. In Windows 10, the thumb nail view of opened programs are available on the taskbar. Move the mouse pointer over any thumbnail to preview it in full screen. Click it to open the program window.
4. Date — Select the current day in the displayed calender. You can change the month using present on the calendar.  
Time — 1. Select the hour in the text box.  
2. Click on the spin arrows to increase or decrease the hours accordingly.  
3. Click Ok.  
You can also click the clock on the taskbar and then click the change date and time setting to open the Date and time dialog box.
5. Programs are usually available on CDs or DVDs. To install a new program, you have to follow these steps:  
Step I – Click on Control Panel and then click on Programs.  
Step II – Under Programs and features option, select. How to install a program.  
Step III – Choose among the three alternatives given as per your choice.  
Step IV – Open check box which displays the location and name of the installation program.  
Step V – Finally click on finish to install the program.

## Brain Twisters

Control Panel is like a command centre of your computer. You can easily control different devices attached to the computer system. You can also use it to change display settings, add or remove a program, change date and time etc.

## Chapter - 4 — Creating Table in MS-Word

### Exercise

- A. 1. (b) Cell                      2. (a) Layout                      3. (b) Split cell  
4. (b) Merging cell    5. (b) Column
- B. 1. Rows and columns    2. Properties                      3. Layout tab  
4. Table Resize Handle    5. Split cells
- C. 1. T                      2. T                      3. T                      4. F                      5. F
- D.1. In most spreadsheet software, you can use the arrow keys (up, down, left, right) to move to the next cell.
2. i. Place the cursor where you want to add columns inside the table. Two new Table Tools tab will appear called Design tab and Layout tab.  
ii. Select layout tab and go to Rows & Columns group. To insert columns the options are insert left and insert right.  
iii. The insertion of rows and columns can also be done by clicking the right mouse button while your cursor is inside the table.
3. The steps are:  
(a) Place your insertion point in the document where you want table to appear.  
(b) Go to the insert tab → Table group → select Table command.  
(c) Hold mouse over the diagram squares to select the number of columns and rows in the table.  
(d) Click your mouse and the table appears in the document.
4. The steps are:  
(a) Select a row or column where you want to apply shade of your choice.  
(b) Go to the Home tab → Paragraph group → Border Button → Border and Shading option. This will display Border and Shading dialog box.  
(c) Click shading tab which will display options to select fill, color and style and whether this border should be applied to text or paragraph or cell or table.
5. Alignment of a text refers to the positioning of text in a cell.

### Brain Twisters

By selecting the Preferred width in the box. Increase or decrease the column width with the help of tab or simply enter the values in numbers. Click on OK.

## Chapter - 5 — MS-Word Mail-Merge

### Exercise

- A. 1. (a) identical information                      2. (a) data source  
3. (c) Record                      4. (a) data source                      5. (a) mailing tab
- B. 1. Sort                      2. merged cell                      3. data source  
4. Sorting                      5. database
- C. 1. F                      2. T                      3. T                      4. F                      5. F
- (4) — Techno Clone

- D. 1. (v) Body
  2. (vi) List of recipients
  3. (iv) The complete single horizontal row
  4. (i) To move from one field to another
  5. (iii) Insert Merge field
  6. (ii) MS Word, MS Excel, MS Access, etc.
- E.1. It stores the information such as names, addresses, telephone numbers, mobile numbers, city etc. It is the list of recipient to whom we want to send letters.
  2. Mail Merge is a facility provided by MS word. It combines two basic components main documents and recipient list. It is used to create letters, forms, envelopes, labels, catalogues and e-mails.
  3. The steps are:  
 Step 1– Click on Next: Preview your letters on the Mail Merge, task pane. The first record will be displayed.  
 Step 2– To preview another letter, click on the Recipient button in task pane or click on next record button to view the next record. You will find next record button in Preview result group in Mailing Tab.
  4. Main document refer to the primary source code file in a program or application.
  5. A merge field, also known as a mail merge field is a placeholder in a document, typically in word processing software that gets replaced with personalized data when performing a mail merge operation.
  6. Click on complete the merge.  
 Click on Print button under Merge section.  
 Merge to Printer dialog box will appear.  
 You can print All or the specified records.  
 Click on Ok button.  
 Print dialog box will appear.  
 Select Printer name and click on OK.

### Brain Twisters

1. Sorting records in data source can be useful for various reasons.
  1. Ease of Retrieval of specific records.
  2. Improved Performance
  3. Sorted data can improve the user experience by presenting information.
2. In mail merge, a data source is used to populate personalized information into each individual document, such as letters or emails. This allows for mass communication while still providing personalized content, as the data source contains variables like names, addresses or any other relevant information that needs to be customized each recipient.

## Chapter - 6 — MS-PowerPoint 2016

### Exercise

- A. 1. (a) Slide sorter
2. (d) Notes Page
3. (a) Record
4. (c) MS office suite
5. (d) Slide show
6. (d) Esc

- B. 1. Click the Print button 2. Subtle  
 3. Click name from the gallery  
 4. From beginning 5. Entrance Effect
- C. 1. F 2. F 3. F 4. T 5. T
- D.1. 1. Normal view – It is selected by default and shows the slide and outline tabs in the Overview pane.  
 2. Slide Sorter view – It displays thumbnails of all of the slides in the presentation.  
 3. Reading view – It displays only the slides with buttons at the bottom of the screen for navigation.  
 4. Notes Page – Displays a small version of the current slide and any notes that go along with it.
2. Subtle – Includes fades, wipes and a shutter like effect.  
 Exciting – Includes more dramatic effects, such as checker boards, ripples and zooming.  
 Dynamic content – Holds the background of the slides still and applies a dynamic effect to the title and other content, such as panning, rotating or flying onto the slide.
3. **Step 1** – Click the File tab  
**Step 2** – In the Back stage view click Print . Notice that the print settings and a preview of the presentation appear together, with print settings on the left and preview on the right.  
 Click the zoom to Page button to fit the slide to the pane.  
 Click the arrows to adjust the number of copies.  
 Specify the printer you want to use and set its properties.  
 Under Settings, Print All slides  
 Under Handouts section, you can also print handouts  
**Step 3** – specify printing option and click the Print button.  
 The presentation gets printed.
4. Both are used to enhance the visual appeal of elements on a webpage but they serve different purposes.  
 Transition Effects —
- They are typically applied to properties such as colour, size etc.
  - Transitions occur in response to a triggering event.
  - They involve a start state, an end state, and a duration.
- Animation Effects —
- They are often used for effects like spinning, sliding, fading etc.
  - They are typically triggered by events but they can also be set to run automatically or loop continuously.
  - Animations are more complex and versatile than transitions.
5. To present a power point presentation to a line audience, you typically have a few options;
- (6) — Techno Clone

1. Using a Computer – Connect your computer to a projector or large screen and use Power Point’s presenter mode to display slides.
2. Using Presenter Tools – Many presentation platforms offer built-in prescutter tools, allowing you to control from a smart phone or tablet.
3. Using a Remote clicker – It allows you to advance slides and control the presentation.
4. Practice and Rehearse – Rehearse multiple times to ensure smooth delivery.

## Brain Twisters

1. PowerPoint is a presentation software developed by Microsoft. It allows users to create visually engaging slides shows for various purposes. Some main features of PowerPoint include:
  - a. Slide Creation – users can create slides with text, images, charts etc.
  - b. Themes and Templates – users can customize these templates according to their preference.
  - c. Transitions and Animations – use them between slides.
  - d. Slide Master – Top thumbnail that appears in the pane and each sub-thumbnail represents each slide layout available in your theme.

## Chapter - 7 — Microsoft Excel 2016

### Exercise

- A.
  1. (b) Undo
  2. (a) Worksheet
  3. (c) Ctrl + Z
  4. (c) 15
  5. (b) Undo command
- B.
  1. 15
  2. 1-beam pointer
  3. Formula bar
  4. Ctrl + Y
  5. 8.43
- C.
  1. T
  2. F
  3. T
  4. F
  5. F
- D.
  1. (ii) used for Undo command
  2. (vi) 15
  3. (v) 8.43
  4. (i) fill cell contents automatically
  5. (iv) used for redo
  6. (iii) arrow shaped, hollow plus sign, 1-beam, etc.
- E.1. Microsoft Excel is one of the most popular spreadsheet software. It provides features and flexibility to process and present the information in desired form. It is specially useful in the areas, where information requires mathematical and statistical calculations.
  2. Autofill is a very useful Excel feature. It allows you to create entire columns or rows of data which are based on the values from other cells. In other words, Excel compares the selected data and tries to guess the next values that will be inserted.
  3.
    1. Using mouse cursor
    2. Using Format menu
  4. It is a small, graphical symbol or icon that appears on your computer screen and moves in response to your physical mouse movements.



1. Mouse pointer becomes arrow shaped when we place it on Menu bar.
2. It shows hollow plus sign when it is in cell.
3. It become 1-beam pointer when we position it on formula bar.
4. It becomes double headed arrow when it is placed between the column headers and row header.
5. It becomes pointing arrow when we place it between the cell headers.
5. Sheet area is the area, where you type your text. The flashing vertical bar is called the insertion point and it represents the location, where text will appear after typing. We can follow these steps.
  1. Click on a cell to select it.
  2. Enter content into the selected cell using keyboard. The content appears in the cell and in the formula bar. You can also enter or edit cell content from the formula bar.
  3. Arrow, Tab and Enter keys are used to move in the required direction.
6. We can change column with
  - (i) Using Mouse cursor
  - (ii) Using Format menu
 Steps using mouse cursor :
  1. Put your mouse cursor on the right side of column header to which you want to alter the width.
  2. Drag the cursor left or right side to increase or decrease column width.
  3. Release the mouse button after reaching the desired column width.
 Steps using format menu :
  1. Select column to increase/decrease column width.
  2. Click on Home tab.
  3. Click on the Format option from the cells group.
  4. Click on column width – a dialog box will appear.
  5. Enter the width in the box.
  6. Click on Ok button. The width of the column will be changed.
7. Delete Rows or Columns/Sheet :
  1. Select the row/columns/sheet that needs to be deleted.
  2. Click on Home tab.
  3. Click on the Delete option from the cells group. Then click on Delete sheet Rows/Delete Sheet columns/Delete sheet.

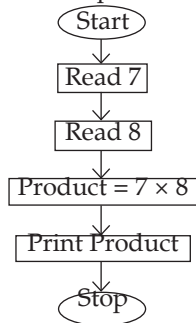
### **Brain Twisters**

1. a. MS-Excel software is used to create, edit, sort, analyze, and summarize data.
  - b. It also functions to perform arithmetic and statistical calculations.
  2. The contents of cells, both data values and formatting, can be moved from one part of a spreadsheet to another so that data do not have to be re-entered if the spreadsheet is reorganized.
- (8) — Techno Clone

# Chapter - 8 — Algorithms and Flow Charts

## Exercise

- A. 1. (c) ○                      2. (c) Algorithm                      3. (c) rectangle  
4. (d) pictorial representation of an algorithm                      5. (c) □
- B. 1. Start / stop box                      2. Input/output box                      3. Flow lines  
4. decision/condition box                      5. Connectors                      6. Processing box
- C. 1. Geometrical                      2. Algorithm                      3. Start/stop box  
4. Flowchart                      5. Circle
- D.1. A set of sequential instructions which are used to execute a specific task or solve a mathematical or logical problem is called an algorithm.
2. i. It helps to think logically and helps to identify the best approach to solve a problem.  
ii. It uses a definite procedure.  
iii. They are easy to understand.  
iv. They are easy to implement.  
v. They are machine independent.
3. A flowchart is a pictorial representation of an algorithm.  
*Example* : A flowchart to find the product of 7 and 8.



4. An algorithm is a step-by-step procedure that tells you how to solve a well-defined problem. It can be expressed in various forms such as natural language, pseudocode, flowcharts, orcode for example, to find the largest number in a list of numbers, you can start with the first number in the list and call it max.
5. Process boxes are the building blocks of flowcharts. It is used for processing and calculating instructions. Examples of processing functions are addition, subtraction, multiplication, division or moving data to storage or assigning a value.

## Brain Twisters

1. In algorithms, flowchart various symbols or annotations can indicate the processing of data. Common symbols like rectangle for process stop, arrows for indicating the flow of control and diamonds for decision

- points. Comments also explain the data processing steps.
- A flowchart consists of boxes called the symbols and arrows called the flow lines. The box depicts the process and the flow line indicates the next step to be performed. This symbol is used to indicate the beginning or the end of a flowchart.

## Chapter - 9 — Introduction to QBasic

### Exercise

- A.
  1. (b) debugging
  2. (c) Q Basic
  3. (a) Power Basic
  4. (d) .BAS
  5. (a) CLS
  6. (b) Vertical scroll bar
- B.
  1. OR
  2. Power Basic and Visual Basic
  3. Basic - exe file
  4. Print
  5. NOT
- C.
  1. T
  2. T
  3. T
  4. T
  5. F
- D.
  1. (vi) do not change during execution
  2. (i) Add, Subtract, Multiply, Divide
  3. (ii) to display messages on the screen
  4. (v) less than or greater than
  5. .BAS
  6. (iv) AND, OR, NOT
- E.1. It clears the output screen which can be used as a fresh screen and clears the previous result.

Example — CLS

```
Print "Hi"
Print "Welcome"
END
```

- Constants are the values, which are fixed and do not change during execution of a program. Examples are your name, date of birth, blood group, etc.

Constants	Variables
(a) These are the values which are fixed and do not change during the execution of a program.	(a) These are the quantities which are temporary and change during the execution of a program.
(b) There are two types of constants: Numeric Constants, String Alphanumeric Constants	(b) There are two types of variables : Numeric Variable, String Variable
(c) Any fixed information expressed through numbers. It includes natural numbers, real numbers or integers.	(c) The quantities that contains numeric values or expressed by number. Example: N%, XYZ% etc.

- These operators are used to combine two or more logical conditions. The

result is true or false. The most commonly used logical operators are AND, OR, NOT.

5. In computer programming, an operator is a character that represents a specific mathematical or logical action or process. In Q basic different types of operators are used.

Arithmetic operators – These operators are used to perform arithmetic operations or calculations in the program. Such as +, -, /, ^

6. You have to use the following steps to save a file.
  1. Click on File menu.
  2. Click on Save As option.
  3. Type the name of file in the File Name: text box
  4. Select OK button and press Enter key. Your file will be saved.

### Brain Twisters

1. In computing, a command is a directive to a computer program to perform a specific task.

CLS (For clear screen) is a common used by the command line interpreters COMMAND.COM and CMD.EXE on DOS, OS/2 and Microsoft Windows Operating Systems to clear the screen or console window of commands and any output generated by them.
2. Arithmetic operators are used to perform calculations on numeric data in a field or fields. They may be used alone or in combination with other operators and functions in both target field expressions. Numeric operands are promoted to double precision values before performing the operation.

## Chapter - 10 — Internet Surfing

### Exercise

- A.
    1. (a) Video-conferencing
    2. (b) E-mail
    3. (a) Carbon copy
    4. (b) e-mail address
    5. (c) Attachment
  - B.
    1. Social networking
    2. Google
    3. Username and the e-mail provider's domain
    4. E-commerce
    5. Exclude
  - C.
    1. F
    2. F
    3. T
    4. T
    5. T
    6. F
- D.1. It refers to any kind of communication over the Internet that offers an instant transmission of text-based messages from sender to receiver.
  2. It is a system of interlinked hypertext documents accessed via the Internet.
  3. It is a type of industry where buying and selling of products or services are done over electronic systems such as the Internet and other computer networks.
  4. Uses of Search Engines are:
    - (a) It helps to find information through the means such as the WWW.

- (b) It allows to make a query usually with a word or phrase and retrieves a list of items that best match the criteria you have requested.
5. Gmail (Google Mail) is a free e-mail service provided by Google. Features of G-mail are:
    - (a) Spam filtering - spam is another name for junk email.
    - (b) Conversation View - an e-mail 'conversation' occurs anytime you send e-mails back and forth with another person, about a specific topic or event.
    - (d) Built-in chat - Instead of sending an e-mail, you can send someone an instant message or use the voice and video chat feature.
    - (e) Call Phone - this feature is similar to voice chat, except it allows you to dial an actual phone number to call any phone in the world.
  6. Social Networking is possible in person, especially in the workplace, universities, schools and colleges. As Internet is filled with millions of individuals who are looking to meet other people, to gather and share first-hand information.

## Project work

DNS — Domain Name System

IP — Internet Protocol

URL — Uniform Resource Locator

Email — Electronic Mail

ISO — International Organization for Standardization

BCC — Blind Carbon Copy

CC — Carbon Copy

WWW — World Wide Web

## Brain Twisters

WWW — The World Wide Web is a system of interlinked hypertext documents accessed via the Internet.

The founder of www is Tim Berners-Lee.

# Chapter - 11 — Deep Learning in AI

## Exercise

- A. 1. (b) Programming2. (b) Deep learning
  - B. 1. Machine 2. Computer Science 3. tasks or generates
  - C. 1. F 2. T
  - D.1. It is a rapidly evolving technology that tries to simulate human intelligence using machines, enabling them to perform a wide range of tasks, from simple to complex.
  2. Deep learning is a machine learning method. It allows us to train an AI to predict outputs, given a set of inputs. It is the highest - level building block in deep learning. A layer is a contains that usually receives weighted input, transforms it with a set of mostly non-linear functions
- (12) — Techno Clone

and there then passes these values as output to the next layer.

3. Advantages are :
  - (a) Cost and time benefits - Neural networks are trainable “brains”.
  - (b) Causality and accurate results - AI does not need any rest and will not make any mistake like human. It uses deep learning to well learn. It takes information from the web to develop understanding, producing accurate, high-quality results.
  - (c) Job growth - Companies implementing machine learning must train or hire employees to use the software.

## MODEL TEST PAPER-1

- A.
  1. (d) Plotter
  2. (c) MS-PowerPoint
  3. (a) explorer
  4. (b) Cell
  5. (a) mailing tab
- B.
  1. pointing
  2. System
  3. Insert
  4. preview result
  5. Mail Merge
- C.
  1. T
  2. F
  3. F
  4. T
  5. F
- D.1. Mouse, Keyboard, Scanner
  2. Features are:
    - (a) automatic memory management
    - (b) garbage collection
    - (c) Interfacing with the kernel
    - (d) extensive error checking
    - (e) Complex arithmetic or boolean expressions
  3. Microsoft Windows File Explorer is a graphical file management utility for the windows operating system (OS). Windows Explorer was introduced with Window 95 and later renamed file Explorer. Each time a computer user access a disk or opens a folder containing files, they are using windows File Explorer Utility.
  4. **To insert a single column** – Right-click the whole column to the right of where you want to add the new column, and then select insert columns.  
**To insert multiple columns** – Select the same number of columns to the right of where you want to add new ones. Right-click the selection, and then select insert columns.
  5. It is a facility provided by MS Word. It creates letters, forms, envelopes, labels, catalogue and e-mails.
- E.
  1. VDU — Visual Display Unit
  2. MICR — Magnetic Ink Character Recognition
  3. OMR — Optical Mark Recognition
  4. LCD — Liquid Crystal Display
- F.
  1. (v) Body of the letter
  2. (vi) List of recipients

3. (iv) The complete single horizontal row
4. (i) To move from one field to another
5. (iii) Insert Merge field
6. (ii) MS-word, MS-Excel, MS-Access, etc.

## MODEL TEST PAPER-2

- A. 1. (a) Slide                      2. (a) Worksheet                      3. (c) rectangle  
 4. (b) debugging                      5. (a) Video conferencing
- B. 1. Click Print                      2. 15                                      3. Connectors  
 4. OR function                      5. Google
- C. 1. F                      2. T                      3. T                      4. T                      5. F

D.1. Step 1: Click the File Tab

Step 2: In the Backstage view click Print.

2. MS Excel is usefull where information requires mathematical and statistical calculations.
3. A algorithm is a list of instructions or the steps required to solve a problem on a computer.
4. CLS command clears the output screen which can be used as a fresh screen and clears the privious result.

Example: CLS  
 Print "Welcome"  
 END

5. Social Networking is possible in person, especially in the workplace, universities, schools and colleges. The Internet is filled with millions of individuals who are looking to meet other people, to gather and share first-hand information.

- E. 1. Start / Stop box  
 2. Input / Output box  
 3. Flow lines  
 4. Decision / Condition box  
 5. Connectors

- F. 1. (vi) do not change during execution  
 2. (i) Add, Subtract, Multiply, Divide  
 3. (ii) to display messages on screen  
 4. (v) less than or greater than  
 5. (iii) .BAS  
 6. (iv) AND, OR, NOT

# Techno Clone - 7

## Chapter - 1 — Computer Hardware - Internal & External

### EXERCISE

- A. 1. (c) SMPS                      2. (d) Motherboard      3. (a) USB Port  
 4. (c) CPU                            5. (c) Port
- B. 1. Microphone                    2. CPU                            3. Joystick  
 4. Barcode Reader    5. Pen drive
- C. 1. T                      2. T                      3. T                      4. T                      5. T
- D.1. Hardware is the physical part of a computer that you can touch and feel.  
 Example - Monitor, Keyboard, etc.
2. Software is the program or instructions that run on the computer. You cannot touch or feel software. Example - Paint, MS Word, etc.

3.

RAM	ROM
(a) Random Access Memory is a read or write memory.	(a) Read Only Memory is a read only memory.
(b) The information is stored temporarily and can be constantly overwritten with a new data.	(b) The information is stored permanently cannot be overwritten.
(c) It is a volatile memory.	(c) It is a non-volatile memory.
(d) Information gets erased when the computer is turned OFF.	(d) Information does not get erased when the computer is turned OFF.

4. Motherboard is also known as a main board, logic board or system board. It is the main electronic circuit board of the computer.
5. A peripheral device is any external device connected to a computer that expands its capabilities or provides input/output functions.

6.

Printer	Projector
(a) Printer is an output device.	(a) Projector is an output device.
(b) It is used to print information that you see on the monitor, to a paper.	(b) It projects images or video from computer on a screen.
(c) Printed paper is called printout.	(c) Projectors work by using a light source.



7.	CD	DVD	Blue-ray Disk
(a)	Stores upto 783,216,000 bytes or 700 MB of data.	It stores data upto 4.7 GB (Single sides) or 17 GB (double-sided)	(a) They can store 25 GB data.
(b)	It stores games and music.	It stores more than seven times of a CD.	(b) They store mainly high quality video files and video games.

### Brain Twisters

A computer stores information using electronic components called memory.

## Chapter - 2 — Microsoft Windows

### EXERCISE

- A. 1. (b) List                      2. (b) Subfolder                      3. (a) Font  
 4. (a) Window
- B. 1. Unit                              2. Folder                              3. Mouse  
 4. Asterik and Question Mark                      5. Thumbnail
- C. 1. F            2. T            3. T            4. F            5. F            6. F
- E.1. A folder is like a cabinet where we keep relevant files.
2. Different view formats are:
- (a) Thumbnails view: It displays the images on a folder icon so that you can quickly identify the contents of the folder.
  - (b) Icon view: It displays your files and folders as small icons.
  - (c) Titles view: It displays files and folders in the form of icons which are larger than those of icons view.
  - (d) List view: It displays the contents as a List of files or folders names preceded by small icons.
  - (e) Details view: This option is used for music files and folders including detailed facts about the files.
3. The steps are:
- (a) Click on Start button.
  - (b) Then click on search option. Search dialog box appears.
  - (c) Click on the All files and folder option in the search companion taskpane which is located on the left side.
  - (d) Type either a part or complete name of the file or folder, or type a word or phrase that is present in the file.
4. To view the content we can perform any of the action below:
- (a) Double - click on the folder icon.

- (b) Right - click on the folder icon and select “open” or “open in new window”.
- (c) Navigate to the folders using File Explorer or Finder.
- (d) Use Command - Line Interface (CLI)

### Brain Twisters

1.
  - a. It changes in the appearance and current settings of windows.
  - b. Hardware and Software setup and configuration.
  - c. System and Security
  - d. Networking and Internet
  - e. User Accounts and family safety
  - f. Setting Clock, Language and Region
2. Window Explorer is used for viewing, exploring and Organizing files in a computer. It enables you to display directory structure that includes drives, folders and files.

## Chapter - 3 — Number System

### EXERCISE

- A. 1. (b) 22                      2. (c) Radix                      3. (c) 0 and 1  
 4. (b) 115                      5. (d) 119                      6. (d) IE
- B. 1. T                      2. F                      3. T                      4. F                      5. T                      6. F
- C. 1. (e)  $(81)_{10}$                       2. (f)  $(115)_{10}$                       3. (a)  $(63)_{10}$   
 4. (b)  $(121)_{10}$                       5. (c)  $(123)_{10}$                       6. (d)  $(71)_{10}$
- D. 1. Decimal                      2. 10                      3. 13  
 4. Hexadecimal number system                      5. 8
- E.1. Base represents the type of number system. A number system of base N has exactly N digits or symbols. Base of the number system is also known as radix.
2. In binary number system, only two digits 0 and 1 are used. It is also called base 2 number system. Each position in a binary number represents a power of the base 2.
  3. The octal number system makes use of base 8. It is also called base 8 number system. Thus, it requires eight digits (symbols) *i.e.* the octal symbols are 0, 1, 2, 3, 4, 5, 6 and 7.
  4. Sixteen symbols (digits) used in hexadecimal system are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, E and F. It is also called base 16 number system. The last symbols A, B, C, D, E and F represent to the decimal numbers as 10, 11, 12, 13, 14 and 15 respectively.
  5. Conversion of Decimal Numbers into Binary Numbers
    1. In order to convert any decimal number into its equivalent binary number, we divide the decimal number by 2.
    2. We keep on dividing the decimal number by 2 till we get 1 as the quotient. Then, start writing all the remainders from bottom to top.

6. The rules are :

(a)  $0 + 0 = 0$

(b)  $0 + 1 = 1$

(c)  $1 + 0 = 1$

(d)  $1 + 1 = 10$

(e)  $1 + 1 + 1 = 11$

### Brain Twisters

The binary number system is the base of all computing systems and operations. It enables devices to store, access and manipulate all types of information directed to and from the CPU or Memory.

## Chapter - 4 — Formatting Data in MS Excel

### Exercise

- A. 1. (c) Average      2. (b) Horizontal      3. (a) Formatting  
4. (c) Sqrt (number)    5. (b) Horizontal section
- B. 1. F      2. T      3. T      4. T      5. T
- C. 1. Alignment      2. Name      3. Parentheses  
4. LEN      5. SQRT ( )
- D.1. The following rules need to be followed while writing a function
- (a) The function should begin with an equals sign (=).
  - (b) The arguments should be enclosed in brackets ( ).
  - (c) The arguments should be separated by comma (,).
  - (d) If any argument contains text value having space, enclose the value in quotes (" ").
2. Orientation refers to the relative physical position or direction of text.
3. Alignment refers to the position where data is placed within boundary of a cell.
4. Statistical functions are:
- (a) Average (no. 1, no. 2) : Calculates the average of given range.  
For ex. = average (12, 8) returns 10
  - (b) Max (no. 1, no. 2) : Returns the maximum value from the range specified. For ex. = max(10, 20, 30, 40) returns 40
  - (c) Min (no. 1, no. 2) : Returns the minimum value from the given range specified. For ex. = min(5, 10, 15, 20) returns 5
  - (d) Count (value 1, value 2 ...) : Counts the number of values in the specified range. For ex. = count (5, 6, 7, 5, 2) returns 5.
4. Auto fill feature of MS Excel allows you to fill data in cells automatically. It is the easiest method.

### Brain Twisters

If you're working with a spreadsheet that contains sensitive or private data, then some rows and columns might be hidden. So that others don't see those data in your own spreadsheet.

We hide because of several reasons like

(a) Data simplification

(b) Confidentiality

- (c) Formatting (d) Calculation Purpose (e) Space Management

## Chapter - 5 — More on PowerPoint 2016

### Exercise

- A. 1. (d) inserting 2. (b) Table Tools tab  
3. (c) Alignment 4. (a) Six 5. (a) Design
- B. 1. T 2. F 3. F 4. T 5. F 6. T
- C. 1. MS Powerpoint 2. Fill color 3. Plot area  
4. data bars 5. Layout
- D.1. MS PowerPoint helps us to communicate our views and ideas effectively, using pictures, charts, clip arts, colours, audios, videos and animated special effects. It helps us to organize the data effeciently.
2. To insert a table in a presentation, select “Title and Content” from the New Slide button on the Home tab.
3. When you insert a table in PowerPoint Table tools appears. We can find various tools and commands present on its Design and Layout tabs, such as Border, shading, Draw table style, Merge cells, split cells, etc. These are helpful while formatting a table in the slide.
4. The steps are :
- (a) Select the chart
- (b) Click on the Design tab under Chart tools.
- (c) Click on the change chart type button in the Type group. The ‘Change Chart type’ dialog box will appear.
- (d) Select any chart type and click OK. The chart will change accordingly.

### Brain Twisters

To delete the default data of a datasheet

- (a) Select all the cells containing the default data.
- (b) Press the delete key on your keyboard or right-click and select “Delete” from the context menu.
- (c) Confirm the deletion if prompted.

## Chapter - 6 — Statements in QBasic

### Exercise

- A. 1. (a) Statements 2. (b) Keyboard 3. (a) LET  
4. (b) ELSE IF 5. (a) GO TO 6. (a) True
- B. 1. F 2. T 3. T 4. F 5. F 6. T
- C. 1. LET Variable = expression 2. loop  
3. single-line, double-line 4. OR operator  
5. AND, OR, NOT
- D. 1. (c) looping 2. (a) Loop within another loop  
3. (e) Similar to Do ..... Loop (d) AND operator

5. (b) Come out of the Loop (f) to display output
- E.1. Input statement is used to accept data from the user through keyboard.
2. We insert comments starting with two forward slashes (//).
3. REM statement is used to insert comments in your program.
4. AND operator shows all the conditions or the multiple check given with AND operator are True (T) then it will give True (T) otherwise it will evaluate False (F) if any one of the condition is false.
5. GO TO statement is used to transfer the control of program to a specific line number or label.
6. A high-level programming language structure that repeats instructions based on the results of a comparison.
7. DIM i AS INTEGER
 

```

i = 1
DO WHILE i <= 11
    PRINT "11 - "; i; "="; 11 - i
    i = i + 1
LOOP
      
```

### Brain Twisters

1. With a Tab function you can specify exactly where you want an item to be printed in an output line. It basically sends the data to the screen, a line printer, or another print file.
2. Program :
 

```

FOR i = 1 to 9 STEP 2
FOR j = 1 TO (9 - i)/2
PRINT " ";
NEXT J
FOR K = 1 To i
    PRINT "1";
NEXT K
PRINT
NEXT i
      
```

## Chapter - 7 — Graphics and Sound in QBasic

### Exercise

- A. 1. (A) Row Value  $\times$  Column Value                      2. (a) Pixels
  3. (a) 0                      4. (b) Color                      5. (c) Screen 0
- B. 1. T                      2. T                      3. T                      4. T                      5. T
- C. 1. 'BF' (Box Fill)                      2. 'LINE'                      3. 'Screen 0'
  4. 'PLAY'                      5. FILL COLOR
- D. 1. (f) Resolution  $320 \times 200$                       2. (e) Light green colour
  3. (a) Resolution  $640 \times 480$                       4. (b) Yellow colour
  5. (c) Used to draw a box                      6. (d) Used to draw a filled box

E.1. The circle command is used in graphics screen modes to create circles, arcs or ellipses. Example – REM draw a circle

Screen 9

Circle (105, 105), 50, 4

2. Paint command paints the particular point with given color and also fill up the closed figure with a given color.
3. Sound command produces different types of sound that has different frequency for a specific time period.
4. Using 'POINT' function or the 'PSET' statement we can display pixels on the screen.
  - (a) POINT Function – It is used to determine the color of a pixel at a specific location on the screen.
  - (b) PSET statement – It is used to set the color of a pixel at a specific location on the screen.
5. The resolution of screen consists of columns and rows that can be specified as Row Value × Column Value. The Standard resolution of computer screen is

### Brain Twisters

1. B Parameter is used to draw a box
2. We can use the following approach:
  - (a) Fill the entire screen with the specified background color.
  - (b) Draw the enclosed shape using a different color.
  - (c) Fill the enclosed shape with its own color, if needed.

## Chapter - 8 — Introduction to HTML

### Exercise

- A.
  1. (c) .htm / .html
  2. (a) Hyper Text Markup Language
  3. (a) HTML
  4. (a) Web browser
  5. (a) Container tags
  - (6) (a) MS frontpage
- B.
  1. F
  2. F
  3. F
  4. T
  5. F
- C.
  1. angle
  2. Start and end tags
  3. Container
  4. Notepad and Wordpad
  5. What you see is what you get
- D.
  1. (c) <HTML> ...</HTML>
  2. (b) What you see is What you get
  3. (e) Notepad and Wordpad
  4. (f) Hyper Text Markup Language
  5. (d) IMG
  6. (a) .htm or .html

E.

	Container Tag	Empty tag
1.	(a) It has both start and end tag.	(a) The tag is a stand-alone tag, i.e. this tag has beginning but no ending tag.

(b) Example – <BODY>, <HEAD>, <TITLE>	(b) Example –  , <HR>, <IMG>
---------------------------------------	---------------------------------

2. It is a piece of markup language used to indicate the beginning and end of an HTML element in an HTML document.

Example –

```
<a href = "https://www.w3schools.com">
  <img border = "0" alt = "w3schools"
    src = "logo_w3s.fig"
  width = "100"
  height = "100">
</a>
```

3. WYSIWYG stands for What You See Is What You Get. It provides a graphical interface which has various tools to help you create your web page without the use of HTML tags.

4. Advantages are:

- HTML is a markup language, not a programming language.
- Process of designing is highly flexible.
- Two or more pages can be linked.
- Markup tags are used.
- Two or more pages can be linked.

5. Attributes are specified within the opening tag of an element and consist of a name and a value, separated by an equals sign.

Example – eye color is an attribute of a person, while screen size is an attribute of a smartphone or TV.

6. This element includes all the tags that come after the head element. These tags give the information about body of document such as text, images, link, etc.

```
<html>
<head>
  <title> Welcome to html
  </title>
<body text = red bgcolor = yellow leftmargin = "100"
  topmargin = "100">
  <b> <i> May God Bless You.
  </b> </i>
</body>
</head>
</html>
```

7. Rules for HTML document:

- Tags are always surrounded by angle brackets, as in <HEAD>
- Most tags come in pairs and surround the material they effect. eg. -

<BR>

- c. The second tag - the “off switch” – always start with a forward slash. eg. <B>, </B>
- d. First tag On, last tag Off. eg.–  
<HEAD> <TITLE> Your text  
</TITLE>  
</HEAD>
- e. Many tags have optional attributes that use values to modify the tag’s behaviour.

## Brain Twisters

1. To change the color, size and other features of HTML elements.
2. Bhawna can follow these steps:
  - a. Open a web browser on her device.
  - b. Navigate to www.yahoo.com
  - c. Once the yahoo home page loads, right-click anywhere on the page.
  - d. In the context menu that appears, select ‘view page source’. This option may vary slightly depending on the browser she’s using.
  - e. alternatively, she can press Ctrl+U on her keyboard to directly view the page source.

## Chapter - 9 — Formatting in HTML

### Exercise

- A. 1. (a) Web pages      2. (a) HTML document  
3. (a) <p>              4. (b) <nobr>              5. (a) <br>
- B. 1. T                  2. T                  3. T                  4. F                  5. F
- C. 1. Center              2. h2                  3. MathML and LaTeX  
4. Noshade              5. Font
- D. 1. (a) Defines a new prograph  
2. (b) Used to strike a line in middle of text  
3. (e) Used to display text as superscript  
4. (d) Used to change the background colour  
5. (f) Used to draw a solid line without shading  
6. (c) Used to insert a new line
- E.1. Heading is used to display the text as the highlighted text that is slightly bigger than other text.  
Here are six levels of heading 1 to 6 that can be represented as <h1>, <h2>, <h3>, <h4>, <h5>, <h6>. h1 is the largest heading.
2. An Alignment is used to align the paragraphs that means it does look more readable and attractive.
3. The <HR> tag have four attributes
  1. Align — It sets the alignment of the horizontal rule.



2. Width — To specify the width of the rule.
3. Size — It specifies the height of the horizontal line.
4. Noshade — It defines the bar without a shading effect.
4. An HTML editor is a software for editing and creating HTML Code that is used for websites or other web documents. There are two main types of HTML editors.
  - a. Text-based HTML editors — the source code can be edited directly.
  - b. WYSIWYG editors — show the document to be edited already the way it displayed in the browser later.
5. Image tags are used to display image or picture on web page. This image can be of type bmp, jpeg or gif format.

To insert an image, you need to provide the complete location, URL or path of an image the alignment of image can be taken as left, right, top, bottom or middle alignment.

6. Strike-through Tag — It is used to strike a line in the middle of text.

Syntax : `<strike>Text </strike>`

Superscript Tag — It displays the text slightly above the line. It is used in mathematical equations. The tag `<sup>` is used to display text as superscript.

Syntax : `<sup> Text </sup>`

Subscript Tag — It is used to display the text slightly below the line as subscript. It display equations.

Syntax : `<sub> Text </sub>`

7. Horizontal rule is used to create horizontal line or rule to separate the contents of web page.

```

Program :      <html>
                <head>
                <Title> Horizontal rule tag
                </Title>
                </head>
                <body>

```

This is the Horizontal Rule or line

```

                <hr size = "5" width = "42%"
                align = "right" noshade>
                </body>
                </html>

```

## Brain Twisters

To display a message when an image is not found in HTML, you can use the 'onerror' attribute of the `<img>` tag.

# Chapter - 10 — Using List and Creating a Table

## Exercise

- A. 1. (a) <dd>tag      2. (b) <tr>... </tr>      3. (a) <td>  
4. (a) block quote      5. (a) nowrap      6. (a) cellspacing
- B. 1. T      2. T      3. T      4. T      5. T
- C. 1. rows and columns      2. bold and centered  
3. <tr>      4. <nowrap>      5. <td>
- D. 1. (c) red background      2. (a) vertical alignment  
3. (b) aligns the caption above the table  
4. (d) off the word wrapping  
5. (e) nested list      6. (f) border = "O"
- D.1. <td> tag is used to insert data in the cells of the rows.  
Syntax : <td>... </td>
2. Block quote needs to separate a piece of text from the rest of text.
3. The attribute type are:
- a. Type – It specifies the number or alphanes it can be either 1, a, A, i or I.
  - b. Start – You can specify the numeric value here to which the list need to start.

Syntax : <ol type = "I | a | A | i | i" start = "number">

```
<li> item1  
<li> item2  
.....  
<li> itemn  
</ol>
```

4. Program :

```
<html>  
<head>  
<titles>  
Name of Fruits  
</title>  
</head>  
<body>  
<centre> <b>  
Names of fruits </b> </center> <br> <ul>  
<li> Apple </li>  
<li> Banana </li>  
<li> Orange </li>  
<li> Pineapple </li>  
</ul>
```

```
</body>
</html>
```

5. Nested list is the list within the main list.

*Example :*

```
<html>
<head>
<title>
Nested Lists
</title>
<ol> <b> <u> Hardware devices of computer
</u> </b> <br>
<li> Input device </li>
<ul>
<li> Mouse </li>
<li> Microphone </li>
<li> lightpen </li>
</ul>
<li> Output devices </li>
<ul>
<li> Printer </li>
<li> Speaker </li>
<li> Plotter </li>
</ul>
</ol>
</body>
</html>
```

6. We can create a table that has no cell contents.

```
<html>
<head>
<title>
Create table in HTML
</title>
</head>
<body>
<table border = "2" width = 50%>
<tr align = "center">
<td> R38 </td>
<td> R39 </td>
</tr>
<tr align = "center">
<td bgcolor = "red"> $ nbsp </td>
```

```

<td> Ashok Behra </td>
</tr>
</table>

```

### Brain Twisters

Shivani can achieve this by using CSS to style the table cell <td> elements.

## Chapter - 11 — Introduction to Java Programming

### Exercise

- A. 1. (c) Variables      2. (a) Deep learning    3. (b) Letter  
 4. (c)  $b = b + 1$       5. (a) Statement
- B. 1. T                    2. F                    3. T                    4. T                    5. F
- C. 1. (c) Names of storage location                    2. (b) Operators  
 3. (e) End by a semicolon    4. (a) Object                    5. (d) Reserve words
- D. 1. C++                    2. Object                    3. Class  
 4. Blue J                    5. Decrement
- E.1. BlueJ environment is a Java development environment particularly designed to teach introductory level to the students.
2. Data types name:  
 byte, short, int, long, float, double, char, boolean.
3. Any constant value which can be assigned to the variable.
4. They perform specific operations on one, two, or three operands, and then return a result.
5. '+' : This operator is used to increment the value of a variable by 1.  
 Example :  $X++$  is same  $X = X + 1$   
 '-' : This operator is used to decrement the value of a variable 1.  
 Example :  $X--$  is same as  $X = - 1$
6. Features are :
- It is dynamic.
  - It is case-sensitive language.
  - It can be interpreted and compiled.
  - It allows multithreading.
  - It is portable and platform-independent

### Brain Twisters

It is called a platform-independent language because its code can be written once and then run on any platform that has a Java Virtual Machine.

## Chapter - 12 — JavaScript in HTML Documents

### Exercise

- A. 1. (a) Javascript      2. (b) 255                    3. (c) String

4. (d) type of                      5. (a) ?
- B. 1. T                      2. T                      3. F                      4. T                      5. T
- C. 1. (d) +, -, \*, %                      2. (c) &&, 11, !                      3. (b) ?:
4. (a) :js                      5. (e) Case-sensitive language
- D. 1. JavaScript                      2. 'document.write()'                      3. Javascript
4. <script>                      5. var
- E.1. Single line comments begin with a double-slash (//). They are used when comment entry has to be given in one line.
2. The rules are:
- It can contain letters (A...Z, a...z), digits (0...9), and underscore (\_) only.
  - Variable names are case-sensitive.
  - It must start with a letter.
  - It cannot contain empty space.
  - It cannot have more than 255 characters.
3. The type of is a unary operator that is placed before its single operand, which can be of any type. Its value is a string indicating the data type of the operand.
4. These operators perform addition, subtraction, multiplication division, exponentiation and modules operation.
5. a. | – called Bitwise OR operator. It performs a boolean OR operation on each bit of its integer arguments. Eg. (A | B) is 3.
- b. & – called Bitwise AND operator. It performs Boolean AND operation on each bit of its integer arguments.  
Eg. (A & B) is 2.
- c. ~ – called Bitwise NOT operator. It is a unary operator and operated by reversing all bits in the operand. Eg. (~B) is 4.
- d. ^ – called Bitwise XOR operator. It performs a Boolean exclusive OR operation on each bit of its integer arguments. Exclusive OR means that either operand one is true or operand two is true, but not both.
- e. >>> – called Bitwise Shift Right with Zero operator. This operator is just like the >> operator, except that the bits shifted in the left are always zero. Eg. : (A>>>1) is 1.
6. Comparison operators are used in logical statements to determine equality or difference between variables or values.  
Logical operators are used to determine the logic between variables or values.
7. The rules are:
- The scripting language has to be written within the starting <script> tag and closing </script> tag in an HTML document.
  - The <script>...</script> tag can either be written in <head> or <body> of the HTML document.

- c. In a program, you can have more than one `<script>...</script>` tags.
- d. JavaScript is a case-sensitive language.
- e. Using semicolon at the end of the statement is optional.

### Brain Twisters

Conditional operators are needed to work on conditions in Java. They control the flow of a program.

## MODEL TEST PAPER-1

- A. 1. (c) SMPS                      2. (d) Motherboard                      3. (b) Subfolder  
 4. (a) Windows                      5. (c) 0 and 1                      6. (c) Radix  
 7. (c) Sqrt (number)                      8. (c) Average                      9. (a) Design  
 10. (d) Inserting                      11. (a) Statement                      12. (a) True
- B. 1. Microphone                      2. Folder                      3. 13  
 4. LEN                      5. Layout                      6. Folder  
 7. Filename                      8. Input                      9. Hardware  
 10. Binary                      11. Sqrt                      12. Chart area
- C. 1. T                      2. F                      3. T                      4. T                      5. F  
 6. T                      7. F                      8. F                      9. F                      10. F
- D.1. Hardware is the physical part of a computer that you can touch and feel.  
 2. Thumbnail view, list view, Icon view, Details view, Tiles view.  
 3. Hexadecimal Number System uses sixteen symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F. It is also called base 16 number system. The last symbols A, B, C, D, E and F represent to the decimal numbers as 10, 11, 12, 13, 14 and 15 respectively.  
 4. Steps are:  
 (a) To insert table, click on the New Slide drop-down arrow on the Home tab.  
 (b) Select the Title and content layout.  
 (c) Click on the Insert Table icon present on the slide.  
 (d) Define the number of columns and rows. Click OK.
5. AND operator - All the conditions or the multiple check given with AND operator are True (T) then it will give True (T) otherwise it will evaluate False (F) if any one of the condition is false.  
 6. A folder is like a cabinet where we keep relevant files.  
 7. A motherboard is also known as a main board, logic board or system board. It is the main electronic circuit board of the computer.

## MODEL TEST PAPER-2

- A. 1. (a) Pixels                      2. (a) HTML                      3. (a) `<p>`  
 4. (a) block quote                      5. (c) String                      6. (b) Color

7. (a) Hyper Text Markup Language                      8. (a) Web Pages  
 9. (a) Nowrap                      10. (a) cell spacing
- B. 1. 'Play'                      2. Container                      3. Font  
 4. Nowrap                      5. JavaScript                      6. BoF FILL  
 7. angle                      8. Noshade                      9. <td>                      10.class
- C. 1. T                      2. F                      3. F                      4. F                      5. F  
 6. F                      7. T                      8. T                      9. T                      10. T

D.1. MS Paint is the basic tool that is present in every Windows software. It is used to colour, draw and edit pictures.

2. These are special words used inside the opening tag to control the element's behaviour.

```
<a href="https://www.shiksha.com/online-courses/">
```

click to visit Shiksha Online </a>

3.	Attribute	Value	Function
	Align	— left, right, center	— It is used to specify the alignment of the horizontal rule.
	Noshade	— noshade	— It removes the default shading effect.
	Size	— pixels	— It is used to specify the height of the horizontal rule
	Width	— pixels	— It specifies the width of the horizontal rule.

```
4. <html>
<head>
<title> Names of Fruits </title>
</head>
<body>
<center> <b>Names of fruits </b>
</center>
<br>
<ul>
<li> Apple </li>
<li> Orange </li>
<li> Banana </li>
<li> Pineapple </li>
</ul>
</body>
</html>
```

5. a. & — Called bitwise AND operator. It performs a Boolean AND  
 (30) — Techno Clone

operation on each bit of its integer arguments.

Eg. : (A&B) is 2.

- b. | — Called bitwise OR operator. It performs a boolean OR operation on bit of its integer arguments.

Eg. : (A | B) is 3.

- c. ^ — Called bitwise XOR operator. It performs a boolean exclusive OR operation on each bit of its integer arguments.

Eg. : (A ^ B) is 1.

- d. ~ — Called bitwise NOT operator. It is a unary operator and operated by reversing all bits in the operand. Eg.: (~B) is 4.

- e. >>> — Called bitwise shift right with zero operator.

Eg. : (A>>>1) is 1.

6. The circle command is used to draw a circle by specifying the center point and radius. Eg. : Type circle or C on the command line and press enter.

7. Body element includes all the tags that come after the head element. These tags give the information about body of document such as text, images, link, etc.

Eg. :  
`<html>`  
`<head>`  
`<title>`  
Welcome to html  
`</title>`  
`<body text = red bgcolor = yellow`  
`leftmargin = "100" topmargin = "100">`  
`<b> <i> May God Bless You.`  
`</b> </i>`  
`</body>`  
`</head>`  
`</html>`

8. Alignment is used to align the paragraphs that means it does look more readable and attractive.

## NATIONAL CYBER OLYMPIAD

### Logical Resoning

1. (d)                      2. (d) RCTQNG                      3. (b) Q  
4. (b) E, C                      5. (d) South                      6. (b)

### Computers and Information Technology

7. (d) Mac Book Pro                      8. (c) Make all content visible within a cell by displaying it an multiple times.  
9. (b) Phishing                      10. (b) Attachment(s)



# Techno Clone - 8

## Chapter - 1 — Concept of Networking

### EXERCISE

- A. 1. (b) NIC                      2. (a) Cable T.V.                      3. (c) PC  
4. (b) Topology                      5. (c) Ethernet Network card
- B. 1. network    2. nodes                      3. PAN                      4. Tree                      5. Right
- C. 1. T                      2. F                      3. F                      4. T                      5. F                      6. T
- D.1. Importance of Network is as follows:
- It preserves the information.
  - In a network hardware cost has been reduced.
  - Storage Media is efficiently used.
  - A network reduces the need for hard copies of all documents.
  - In a network, the deletion, modification of the software data is to be done at a single point only.
2. Network security means protecting data and resource from any unauthorised access.
3. Wired Network has electrical cables (Such as twisted pair coaxial cable or optical fibre) that are used to carry signals from one end to other. Wireless Network do not require cables rather than signals and are transmitted using Bluetooth, Infrared, Microwave or Radiowave.
4. Types of Network Topology are:
- Bus Topology - In this topology, a single cable known as a backbone with multiple points is involved.
  - Star Topology - All the computers are connected to a central hub/switch.
  - Ring Topology - This topology uses multiple links to form a loop of computers.
  - Tree Topology - It is a combination of Bus topology and the star topology.
5. It is extremely important that the network is to be protected and unauthorised access and usage of data can either be prohibited or controlled. Two types of securities are:
- Login Security - All the users who want to access the data are provided unique user names and passwords.
  - Rights Security - It is a step forward to login security. Restricted access rights can be provided to users.
6. In a network, where several computers called clients are connected to the main computer called the server. A server is a computer that provides services to client and controls access to hardware, software and other researches. Clients are the computers, which request services, like data retrieval storage, etc, from the server.

## Activity Zone

- a. SERVER                      b. CONNECTOR                      c. TOPOLOGY  
d. CIRCULAR                      e. LOGIN

## Brain Twisters

As bus topology is easy to install and requires less cable than other types of network topologies.

# Chapter - 2 — Log on to MS Access

## EXERCISE

- A. 1. (a) Telephone Directory                      2. (c) Navigation pane  
3. (c) Design View                      4. (b) 63,999                      5. (b) Lookup Tab
- B. 1. MS Access                      2. Management                      3. Navigation  
4. alpha-numeric                      5. primary key
- C. 1. T                      2. T                      3. T                      4. T                      5. T                      6. T
- D. 1. (c)                      2. (d)                      3. (a)                      4. (e)                      5. (b)
- E.1. The various components are:
- Title Bar - shows the name of currently opened database.
  - File tab - displays the backstage view of file commands, like New and Open.
  - Quick Access Toolbar - shows quick access buttons to Save, Undo and Redo commands.
  - Ribbon - displays groups of related commands in tab.
  - Database object - It has 4 main objects – Table, Queries, Forms, Reports.
  - Navigation Pane - contains all available database objects.
  - Status Bar - displays information about the current object or view.
  - Work Area - differs according to database element selected.
2. A database is a data structure that stores organized information. Advantages are:
- Easy Maintenance - As the information is digitalized it is easier and economical to carry out any maintenance.
  - Minimum Data Inconsistency - It helps us to minimize data in consistency.
  - Improvement in data integrity - The database you have created is very important for you and it needs protection.
  - Standardisation of data - Since the data is stored centrally, it is easy to enforce standards on the database.
3. To create a table using Datasheet view, the steps are:
- Click on the Create tab on the Ribbon.
  - Click on the table option. New table is opened.
  - Double-click the column header to create a field name. Type a name for the field.
  - Press Enter key from the keyboard.
  - Click on the next column. The Data type menu will display.

- (f) Select the data type for the field.
  - (g) Type a name for the field.
  - (h) Click inside the first field of the first row and type the data to enter the first record.
  - (i) Press Tab key.
  - (j) Type the next field's data. When you reach the last field, you can press Enter to Start a new record.
4. Creating a new table in Design view:
- (a) Open the database and click on create tab on the Ribbon.
  - (b) The table tools tab will displays on the top of the title bar. Select design tab.
  - (c) In the field name column, enter the name of the first field.
  - (d) Press the Tab key to move the insertion point to the data type field.
  - (e) To alter the data type, click on the drop-down arrow and modify the data type as per your choice. Properties will appear.
  - (f) Press the tab key to bring the insertion point to the description column. Enter your text in description column.
  - (g) Press the tab key again to move to the Field Name column in the second row and enter the text in the column. You will see the word 'Text' in that field.
  - (h) Press tab key to move the insertion point to Data Type Column.
  - (i) Press the Tab key to move the insertion point to Description column. Enter the text.
  - (j) Repeat the steps to make the rest entries. The table is complete.
5. The steps are:
- (a) Double-click on table Personal\_detail in the database window.
  - (b) Type the ID Number in the first Employee\_ID field.
  - (c) Press the Tab key to complete other entries for the Employee\_ID 1001. Press the tab key and enter record.
  - (d) After entering the last entry, contact number, press the tab key.
  - (e) enter the remaining records and follow the same steps to add the first recording.
  - (f) When you complete entering data, click on Save button to save the changes. MS Access saves the table and you can see the name of the table and you can see the name of the table in Navigation table.
6. The field properties are as follows:
- (a) Properties Pane - When field is selected in Design view, its properties are displayed in lower pane.
  - (b) General Tab - It comprises most of the properties
  - (c) Lookup Tab- It is mainly used for setting up lookup lists.
  - (d) Drop-down lists - Some properties have drop-down list, we can by clicking the arrow.
  - (e) Property Information - When insertion point is in property's box, information displays here.
  - (f) Yes/No Properties - Some properties show Yes/No questions which are filled with default values.

- (g) Setting Field size Properties - The default field size for a field with a data type of text is 255 characters.
7. Each field has a data type that specifies what you can store in it. There are so many data types used in MS Access - Text, Memo, Number, Date/Time, Currency, Yes/No, OLE object, Auto Number, Hyperlink, Attachment, Lookup Wizard, Calculated, etc.  
Date/Time tells to type only stored numbers showing valid dates and times. Currency stores currency data that you can use in calculations.
  8. Field Property is an attribute that defines an object's appearance, behaviour or characteristics.

### Brain Twisters

- DBMS Software systems are used to retrieve, store and run queries on data. It serves an interface between an end-user and a database, allowing users to create, read, update and delete data in the database.

## Chapter - 3 — More Features of MS Access

### EXERCISE

- A. 1. (a)                    2. (c) Both    3. (b) Create   4. (b) View   5. (b) Form
- B. 1. Look In                    2. Datasheet                    3. Foreign key  
4. Form Wizard    5. Toggle Filter
- C. 1. T            2. T            3. T            4. F            5. F            6. F
- D.1. Find and Replace command is very useful in MS Access to find and replace something in a large database.
2. The form wizard is a simple form with the sole purpose of containing a wizard control. Each wizard control contains multiple pages and each page contains one subform.
3. We will sort the records by following some steps:
  - (a) Open the table when you want to sort records.
  - (b) Click on column header for the field that is to be sorted.
  - (c) Click on the Home tab on the Ribbon.
  - (d) Click on either of the Sort options.
  - (e) Click on Ascending to sort the records in ascending order.
  - (f) Click on Descending to sort the records in descending order.

*Example:* If you sort by last name and then by birthdate, all records with a Last Name value of row appear before records with a Last Name value of Stevens, regardless of the value of Birthdate. Sorting weekdays so that Monday appears first makes more sense than sorting in alphabetical order, where Friday appears first.
4. The steps are:
  - (a) Open the table if it is not already open.
  - (b) Click on Home tab on Ribbon.
  - (c) Click on Advanced option drop-down arrow located in Sort & Filter group.
  - (d) Click on Filter By Form.

- (e) In the Filter by Form window select the field and value that is to be used as criteria.
  - (f) Select Department field. Click on the Department drop-down menu. Select sales from the list. This will contain only records whose department comprises "Sales".
5. We can Add a field in a table by following some steps:
- (a) Right-click the name of the field that you want to be displayed after the new field.
  - (b) Click on Insert field. A new field displays in the table. It will assign a name to the new field as Field1. Now you can rename the field name and add information to it.

We can delete a field in the table by same steps given below:

- (a) Right-click on the field that is to be removed. A menu will display.
  - (b) Click on Delete Field. A prompt box displays.
  - (c) MS Access removes the field and records the content for the field from the table.
6. Follow the steps to change the view of table:
- (a) Click on view button on view group of Home tab.
  - (b) Then a drop-down will open, now select in which you want to change the table.
- Example:* From the Table view to the Graph view or List view by clicking the switch to icon in the bottom left corner of the object window. In the web client, if you have created a chart view of object then the chart is displayed.
7. To create relationship between tables follow the given steps:
- (a) Click on Database Tools tab.
  - (b) Click on relationships option from the Ribbon to show the Relationships window. A relationship window displays.
  - (c) The show table dialog box may also display, giving all the tables in your database.
  - (d) Click on a table which is added to the Relationship window.
  - (e) Click on the Add button to add the table to the window.
  - (f) When you complete adding tables to the Relationships window, click on the close button to remove the Show Table dialog box.
  - (g) The Relationship window displays a box for each table. The primary key is highlighted.

### Brain Twisters

The primary key uniquely identifies each record in a table.

## Chapter - 4 — Working With Queries/Forms/Reports

### Exercise

- A. 1. (b) Two                      2. (b) Parameter query  
 3. (c) Layout View    4. (b) Four
- B. 1. Query    2. Criteria    3. Sort    4. Form    5. Query

- C. 1. T            2. T            3. T            4. T            5. T  
6. T            7. F            8. T

- D.1. A Query is a simple question that you ask to find a particular information from the database.
2. It includes the condition on the basis of which the records will be filtered in the Query output.
  3. To make a query in Query Wizard, do the following steps given below:
    - (a) Click on the Create tab.
    - (b) Select the Query wizard button in the Queries group.
    - (c) The new query dialog box displays. The simple query wizard option is selected by default.
    - (d) The simple Query wizard screen displays as shown in the figure. Select the table that includes the data in the Table/Queries list box.
    - (e) Now, add the fields that you want to have in the query result.
  4. A form is a piece of paper on which a user fills the desired information in the specified field. To format a form using design tab follow some steps:
    - (a) Click on Logo in the Header/Footer group. The insert picture dialog box displays. Select any picture and click Ok.
    - (b) Click on title in the Header/Footer group. Enter Student query as the title for the form.
    - (c) Click on Data and time in the Header/Footer group. The Date and Time dialog box will display. Choose the required format of the Date and Time and click OK.
    - (d) Click on themes in the Themes group. Click on the desired theme from the drop-down menu.
  5. A report is an object in MS Access that is used to display and print your data in an organized manner. To export a report follow the given steps:
    - (a) Click on the drop-down arrow of the view button on the Home tab and select Print preview from the drop-down list of options.
    - (b) The report will be opened in the Print Preview layout and the ribbon will show the commands associated with Print Preview layout.
    - (c) On the Data group, click on the drop-down arrow of the More button and select word.
    - (d) The Export RTF file dialog box will display on that screen. Select the location and save it and give a suitable name to the report. You will find some export options. Select as per your requirement.
    - (e) Click OK.
    - (f) A final screen will display on the screen on the completion of export process.
    - (g) Click on Close button.
    - (h) Find the word file where report has exported and open it.
  6. Field is the name of the family field. The first row of the Design grid shows the selected field names from the table.

## Brain Twisters

You can use a SQL query in MS Access to display all records whose name starts with 'R' and has a length of 5 characters. Example query–

Select\*

FROM yourtablename

WHERE LEN([yourfilename]) = 5 AND [yourfieldname] LIKE 'R\*';

Replace 'yourtablename' with the name of your table and 'yourfieldname' with the name of the field where the names are stored. this query will retrieve all records where the field value starts with 'R' and has a length of 5 characters.

## Chapter - 5 — Google Apps

### Exercise

- A. 1. (b) explore outer space    2. (c) App.    3. (c) both of these
- B. 1. Google Sky                    2. payment                            3. Google Drive  
4. 3D                                    5. Google Now
- C. 1. T                                  2. T                                  3. F                                  4. T                                  5. T
- D.1. A Google account is an account associated with a domain that uses Google Apps (mail, calendar, docs and sites) for messaging and collaboration.
2. A mobile application is a computer program or software application designed to run on a mobile device such as phone, tablet or watch.
3. The five google apps are Google Talk, Google Translate, Google Wallet, Google Photos, Google Maps, etc.
4. The uses of Google Apps are:
  - (a) Google Docs, sheets, and slides enable real-time collaboration of documents, spreadsheets and presentations respectively.
  - (b) Google Workspace includes Gmail, which provides a powerful email platform for individuals and businesses. It serves as a comprehensive communication solution for teams and organizations.
  - (c) Google Drive offers cloud storage for storing, accessing and sharing files from anywhere within an internet connection.
5. Google Drive allows its users to store files in the cloud, synchronise files across devices and share files.  
Google Photos is useful to backup your photos safely.
6. In 2014, one significant innovation in Google Apps was the introduction of Google classroom. Google classroom revolutionized the way teachers and students interacted digitally by providing a platform for organizing assignments, distributing resources and facilitating communication within the educational settings.
7. The steps are:
  - Step 1: Get an idea or problem. Think about your needs for an App.
  - Step 2: Start sketching. In this step you will conceptualise the features which you want to include in the App.
  - Step 3: Download the necessary tools according to your platform.
  - Step 4: Build the back end of your app. Over here you have to setup

servers, databases and store solutions as per your requirement.

Step 5: Creating the App. Create the look and feel of the App. Generate a storyboard which is a visual representation of all your app's screen. Build the UI. Add components through which users interact with your App customise it. Finally add functionality and integrate with the back end.

## Brain Twisters

It is a video sharing website, it acts as a distribution platform for original content creators.

# Chapter - 6 — E-commerce

## Exercise

- A. 1. (c) Google    2. (c) B2H    3. (c) both a & b    4. (a) credit card
- B. 1. E-commerce    2. Website    3. B2B  
4. E-commerce    5. Credit Card
- C. 1. F    2. F    3. T    4. F    5. F
- D.1. E-Commerce stands for electronic commerce which mean buying and selling of goods and services over the Internet.
2. There are four basic models of e-commerce business namely: Business to Consumer, Consumer to Consumer, Business to Business and Business to Employee.
3. Electronic Fund Transfer is a very popular electronic payment method to transfer money from one bank account to another account. Accounts can be in the same bank or different. Funds transfer can be done by using ATM or using computer.
- Credit Card is a small plastic card with a unique number attached with the account. When a customer purchases a product via Credit card, Credit card issuer bank pays on behalf of the customer.
- Debit card is also like credit card with a unique number. The payment done through Debit card makes the amount deducted from card's bank account immediately.
- E-money transactions refers to situations where payment is done over the network and the amount gets transferred from one financial body to another financial body without any involvement of a middleman. It is faster and saves a lot of time.
4. Advantages of E-commerce are:  
(a) Buying/selling 24×7  
(b) No need of physical company set-ups.  
(c) Easy to start and manage a business.  
(d) It saves time and efforts to buy a good.
5. E-Commerce is carried out as follows:  
(a) The customer finds out the product from online shopping listings.  
(b) The customer collects an electronic shopping cart.  
(c) The customer enter a secure website displaying various payment information.



- (d) The financial information filled in by the customer is sent to the bank for verification.
  - (e) E-retailer sends a confirmation to the customer through its web server. The order comes in process.
  - (f) The products are packed according to the order. Then they are forward for the shipment.
  - (g) The order is carried to the customer. All the shipment details are uploaded on the website.
  - (h) At last the product is delivered to the customer. The customer gives receiving confirmation of the product.
6. The steps are:
- (a) Open Internet Explorer on any other browser and type the address of any online shopping website.
  - (b) Search the product you want to buy.
  - (c) Read the specification of the product. Click on Buy Now to the product.
  - (d) My Cart window will appear. Click on Proceed to Pay.
  - (e) If you have created an account enter the details correctly.
7. E-commerce means buying and selling of goods and services over the Internet. Online shopping is a form of electronic commerce which allows consumers to directly buy goods or services from a seller.

### Brain Twisters

The biggest advantage is cost reduction.

## Chapter - 7 — Adobe Photoshop CS6

### Exercise

- A. 1. (b) CS5                      2. (a) psd                      3. (c) Thomas Knoll  
 4. (c) Crop                      5. (b) Ctrl+Z
- B. 1. image    2. Resolution    3. Palettes    4. Link    5. Cropping
- C. 1. F            2. T            3. T            4. T            5. T
- D.1. The features of Adobe Photoshop are:
- (a) Layers - Allows for non-destructive editing by stucking different elements of an image separately.
  - (b) Filters and Effects - Provides numerous filters and effects for enhancing and altering images.
  - (c) Text Tools - Allows for adding and formatting text within images.
  - (c) Text Tools - Allows for adding and formatting text within images.
  - (d) 3D Editing - Supports creating and editing 3D models and textures.
  - (e) Color Correction - offers tools for adjusting brightness, contrast, saturation and color balance.
2. Lasso tools make free hand, polygonal selection.
- (a) It selects an object by drawing a freehand border around it.
  - (b) Click the tool button, drag to draw a freehand border around the area of the image you wish to select.

3. Crop tool removes the unwanted parts of a picture. Basically it trims the images. It is one of the most basic editing technique that can improve your images. The steps are:
  - (a) Click the tool button, then click and drag the tool over the part of the image that you want to keep.
  - (b) Resize the selected area dragging the squares at the sides and corners.
  - (c) Click the Return/Enter key when your crop box is sized correctly.
4. Adobe Photoshop allows us to create, magnify, combine and optimize digital images. It is mainly used by professional designers, photographers, graphic producers and web developers for creating and editing images.
5. We can remove by following some steps:
  - (a) Open the photo you wish to correct.
  - (b) Select the Clone Stamp tool from the toolbox.
  - (c) In the options bar, change the Blend Mode from Normal to Darken as shown in the figure.
  - (d) Set the opacity to 50 percent.
  - (e) Choose a soft-edged brush, set the diameter to 40 or 50.
  - (f) Hold down the shift key and click in the clean area to get a sample of color.
6. Magic Wand tool selects similarly colored areas. It specifies the color range or tolerance. We can control whatever magic wand tool selects.

### Brain Twisters

Painting tools in Photoshop creates and manipulates digital artwork, simulating traditional painting techniques. Two painting tools are brush tool and Mixer bursh tool.

## Chapter - 8 — Introduction to Visual Basic

### Exercise

- A. 1. (b) forms                      2. (a) Design mode            3. (a) Properties  
     4. (c) Object Browser          5. (a) Command
- B. 1. instruction                    2. BASIC                            3. top  
     4. Caption                        5. flat
- C. 1. T                      2. T                      3. T                      4. T                      5. F                      6. T
- D. 1. (b)                      2. (d)                      3. (e)                      4. (c)                      5. (a)
- E.

1.	<b>Visual Basic</b>	<b>BASIC</b>
	(a) Object-oriented programming language	(a) Procedure-oriented language
	(b) It is developed from another language, BASIC, which is DOS-based.	(b) BASIC stands for Beginners' All-purposed Symbolic Instruction Code.

(c) Programming is performed in a graphical environment.	(c) Programming is performed in a text-only environment.
(d) Visual Basic is more advanced and feature-rich language.	(d) It is simpler and more limited in functionality.
(e) Visual Basic has a more structured syntax and is more prone to modern programming languages.	(e) It has more relaxed syntax rules and are more forgiving to beginners.

2. Properties specify the name of the form or an object.  
 Methods are the actions performed on the forms or objects.  
 Events is a message sent by an object denoting that something has occurred. Examples of properties:
  - (a) 'age' property of a 'person' object representing their age.
  - (b) 'color' property of a 'Button' object, determines its visual appearance.
 Examples of Methods:
  - (a) 'draw()' method of a 'shape' object, rendering the shape on a canvas.
  - (b) 'toUpperCase()' method of a 'string' object, converting the string to uppercase.
 Examples of Events:
  - (a) 'onLoad' event of a webpage, find when the webpage finishes loading.
  - (b) 'OnClick' event of a 'button' object triggered when the button is clicked.
3. The three steps are:
  - (a) Design the interface
  - (b) Set properties of the controls.
  - (c) Write the event procedures.
4. When the user clicks on the command button, it displays on illusion that the button is pressed. An event - related to the command button is clicked, which is triggered when it is selected by clicking on it.
5. The steps are:
  - (a) Click on the Start button.
  - (b) Select All Programs option from the Start menu.
  - (c) Click on the Microsoft Visual Studio 6.0 option.
  - (d) Select Standard.Exe from the new tab of New Project Window and click on the Ok button.
  - (e) Microsoft Visual Basic Window will display on the screen.
6. The Components of Visual Basic are:
  - (a) Title Bar: It is present at the top of the window displaying the name of the currently open project.
  - (b) Menu Bar: It renders you with different drop-down menus to carry

out different commands. It helps in developing the application.

- (c) Form layout window: It allows you to position the forms in your application using a small graphical representation of the screen.
- (d) Form window: From is a user interface within the application. It contains many control elements, such as labels, text boxes and command buttons, etc. It provides blank form.

### Brain Twisters

Text box is the standard control for obtaining input from the user and displaying the output. It can handle both text(string) and numeric data. Toolbox provides a set of tools that you use at design time to place controls on a form. You can also create your own custom layouts.

## Chapter - 9 — Basic Animation in Flash

### Exercise

- A. 1. (a) FPS                      2. (a) Animation              3. (b) Frame-by-frame  
4. (b) Stage                      5. (b) F5
- B. 1. timeline                      2. fields                      3. records  
4. car                              5. Flash
- C. 1. F                      2. T                      3. T                      4. T                      5. F
- D.1. A frame is a single still image within a sequence of images that make up an animation. It represents a specific point in time and contains the visual information for that moment. Keyframe is a frame in an animation sequence that defines a significant point in the animation. It contain specific instructions about position, scale, rotation and other properties of objects within the animation.
- 2. It refers to organizing visual elements into separate levels that can be manipulated independently. Each layer can contain different elements such as images, shapes, text or effects, as they can be stacked on top of each other to compose the final scene. Layers provide flexibility and control over the design and animation process.  
Example: create a digital illustration of a landscape with multiple elements like a sky, mountains, trees, and a river.
  - (a) Starting with a background layer represents sky. Fill this layer with a gradient or solid color to depict sky's appearance.
  - (b) Now add layer for the mountains. Mountains appear in front of the sky.
  - (c) Create another layer for trees. Draw or place tree image on this layer. Tree appears in front of mountains.
  - (d) Now add a layer for river. It contains shape representing the river's path.
  - (e) Finally, create a layer for any additional foreground elements, such as bushes or rocks. This create a sense of depth.

3. Animation is the process of creating the illusion of motion and change by rapidly displaying a sequence of still images or frames. It can be achieved through various techniques, including traditional hand-drawn animation, CGI, stop-motion animation, etc.
4. Tweening in animation is a short for in between the process of generating intermediate frames between two images to give the appearance of first image involves smooth into the second image. It is used to change the shape or position of the object at fixed interval of time. It has smaller file size.

Motion tween refers to any object that travels from one point to another and involves no change in shape or size of the object over a period of time. Changes can be there in colour, texture or distance of the objects.

Shape tweening draws a shape at one frame in the timeline and change that shape to another shape at another specific frame.

5. Timeline is used for organizing and controlling animations. Some uses of timeline are:
  - (a) It allows animators to create animations frame by frame.
  - (b) It allows animators to set keyframes and interpolate between them, creating smooth motion transitions.
  - (c) It allows to organize elements into separate layers.
  - (d) It can control timing and duration of animations using the timeline.
  - (e) It allows interactivity through ActionScript, a scripting language.

## Brain Twisters

Flash is used to create animations for web pages.

# Chapter - 10 — More About Python

## Exercise

- A. 1. (a) case sensitive    2. (b) beginners
- B. 1. reference                2. Chain comparison    3. return
- C. 1. F                        2. F
- D.1. Python is a high-level programming language designed to be easy to read and simple to implement. It is an open source, which is used for commercial applications. It is a scripting language. It is used for creating web applications and dynamic web content.
2. Python is an interpreted language, which means that instead of directly means that instead of directly running machine code generated by a compiler, Python code is executed line by line by an interpreter.
3. Companies that use Python are:  
Instagram, Spotify, Amazon, Survey Market, Facebook, etc.

# MODEL TEST PAPER-1

- A. 1. (b) NIC                      2. (c) Navigation pane  
3. (b) Create                    4. (b) Parameter query        5. (c) Both of these
- B. 1. nodes                        2. MS Access                    3. Foreign Key  
4. Form                            5. 3D
- C. 1. F                            2. T                            3. T                            4. T                            5. T

D.1. Importance of Network is as follows:

- (a) It preserves the information.  
(b) In a network hardware cost has been reduced.  
(c) Storage media is efficiently used.  
(d) A network reduces the need for hard copies of all documents.  
(e) In a network, deletion, modification of software data is to be done at a single point only.
2. To create a table in datasheet view follow the steps given below:  
(a) Click on the create tab on the Ribbon.  
(b) Click on the table option. Now table is opened.  
(c) Double-click the column header to create a field name. Type a name for the field.  
(d) Press Enter key from the keyboard.  
(e) Click on the next column. The data type menu will display.  
(f) Select the data type for the field.  
(g) Type a name for the field.  
(h) Click inside the first field of the first row and type the data to enter the first record.  
(i) Press Tab key.  
(j) Type the next field's data. When you reach the last field, you can press Enter to start a new record.
3. We will sort records by following the given steps:  
(a) Open the table when you want to sort records.  
(b) Click on column header for the field that is to be sorted.  
(c) Click on the Home tab on Ribbon.  
(d) Click on either of the sort options.  
(e) Click on Ascending to sort the records in ascending order.  
(f) Click on Descending to sort the records in descending order.  
Example: If you sort by last name and then by birth date, all records with a last name value of row appear before records with a last name value of Stevens regardless of the value of the birth date. Sorting weekdays so that Monday appears first makes more sense than sorting in alphabetical order, where Friday appears first.
4. To make a query in Query wizard follow the steps:  
(a) Click on the create tab.

- (b) Select the Query wizard button in the Queries group.
  - (c) The new query dialog box displays. The Simple Query Wizard option is selected by default. Click OK.
  - (d) The Simple Query wizard screen displays as shown in the figure. Select the table that includes the data in the Table/Queries list box.
  - (e) Now, add the fills that you want to have in the query result.
5. Google drive allows its users to store files in the cloud, synchronise files across devices and share files. Google Photos is useful to backup your photos safely.

## MODEL TEST PAPER-2

- A. 1. (c) Google                      2. (c) Crop                      3. (b) Properties  
 4. (b) F5                              5. (b) Beginners
- B. 1. E-commerce                    2. Resolution                    3. top  
 4. car                                  5. Chain Comparison
- C. 1. F                      2. T                      3. F                      4. T                      5. F
- D.1. The advantages are:
- (a) Buying/Selling 24×7
  - (b) No need of physical company set-ups.
  - (c) It saves time and efforts to buy a good.
  - (d) Easy to start and manage a business.
2. Adobe Photoshop allows us to create, magnify, combine and optimize digital images. It is mainly used by professional designers, photographers, graphic producers and web developers for creating and editing images.
3. When the user clicks on the command button, it displays an illusion that the button is pressed. An event related to the command button is clicked, which is triggered when it is selected by clicking on it.
4. Yes, flash is a multimedia software.
5. Python is an interpreted language, which means that instead of directly running machine code generated by a compiler, Python code is executed line by line in an interpreter.

## NATIONAL CYBER OLYMPIAD

### Logical Resoning

1. (d) ORYH                      2. (d) 360                      3. (c) E  
 4. (a) 10                              5. (b) LIH                      6. (b) Programming

### Computers and Information Technology

7. (c) Bluetooth setting                      8. (b) Beginners  
 9. (b) 3                              10. (b) Paint bucket



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