

# TYPES OF COMPUTERS



## Teaching Objectives:

The objectives of this unit are to:

- Explain the types of computer

## Learning Outcomes:

After completing the unit, students will be able to:

- Explain the types of computer

**Number of allocated periods: 4**

### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain digital, analog and hybrid computers.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 2, 3) pg. 8, C (a) pg. 9

### Period 2:

- Reading and explanation (35 minutes)

Explain digital computers in detail.

- Homework assignment (5 minutes)

Attempt Ex. A (4, 5, 6) pg. 8

### Period 3:

- Reading and explanation (35 minutes)

Explain microcomputers.

- Homework assignment (5 minutes)

Attempt Ex. B pg. 8

### Period 4:

- Reading and explanation (35 minutes)

- Explain portable computers.

- Homework assignment (5 minutes)

Attempt Ex. A(7) pg. 8, C (b) pg. 9.



## EXERCISE-1

## Types of Computers

### A. Answer the following questions:

1. Name the different types of computers.

The different types of computers are digital, analog and hybrid.

2. What is a Digital Computer?

A digital computer is fast, depending on the latest technologies. It uses the binary language. Computers being used nowadays are mostly digital computers.

3. How will you define an Analog Computer?

An analog computer works by measuring continuous change in data.

An example is speedometer of a vehicle.

4. How are Microcomputers different from Minicomputers?

Minicomputers have a larger storage capacity and more processing speed than microcomputers.

5. What is the main characteristic of Super Computers?

Super computers are designed to perform complex calculations.

6. Write the basic purpose of using Mainframe Computers.

Mainframe computers allow their users to maintain a large information storage at a centralized location.

7. How many types of Portable Computers are used? Name them.

The types of portable computers are laptop, notebook, tablet and hand-held.

### B. Fill in the blanks:

1. A \_\_\_\_\_ digital \_\_\_\_\_ computer is a computer which understands only two codes: 1 and 0



## Types of Computers

2. An analog system works by measuring continuous change in the data.
3. Mainframe computers allow their users to maintain a large info storage.
4. The Personal computer is the most common microcomputers.
5. Portable computers are those microcomputers that one can carry around.
6. Tablet computer is slightly bigger than a calculator.
7. A laptop is small enough to use on one's lap.
8. A personal computer or PC is generally a microcomputer.
9. A microcomputer is also known as personal computer.

### C. Write short notes on the following:

- a. Digital computer  
A digital computer is fast, depending on the latest technologies. It uses the binary language. Computers are being used nowadays are mostly digital computers.
- b. Portable computer  
Portable computers are the microcomputers that can be carried around. Portable computers are divided into different types based on their size, weight, processing speed. The types of portable computers are laptop, notebook, tablet and hand-held computers.

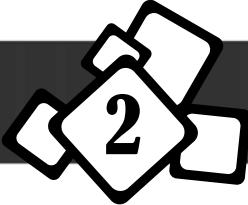
### Activity / Test sheet based on Unit 1

- 1) Answer the following questions:
  - a. Explain hybrid computer.  
Ans. A combination of computers that are capable of inputting and outputting in both digital and analog signals is called a hybrid computer.



## Types of Computers

- b. Which is the most common and smallest type of computer?  
Ans. The most common and smallest type of computer is microcomputer. It is further classified into Personal computer, Home computer and Portable computer.
- c. Name the types of portable computer.  
Ans. Portable computers are classified into laptop, notebook, tablet and hand-held.
- d. What does PC stand for?  
Ans. PC stands for Personal Computer.
- e. Define laptop.  
Ans. A laptop is small enough to be used on one's lap. Laptop computers are portable computers that combine a flat screen, keyboard and pointing device in a single, light weight unit.



## HARDWARE AND SOFTWARE



### Teaching Objectives:

The objectives of this unit are to:

- Explain hardware and its types in detail
- Explain software and its types in detail

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain hardware and its types in detail
- Explain software and its types in detail

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain the term hardware, system unit, microprocessor and motherboard. If possible, the teacher can show the hardware components.

- Homework assignment (5 minutes)

Attempt Ex. A (1) pg. 21

#### Period 2:

- Classroom activity (35 minutes)

Explain the types of computer memory, secondary memory and advantages of data storage devices.

- Homework assignment (5 minutes)

Attempt Ex. B (1) pg. 21

#### Period 3:

- Reading and explanation (35 minutes)

Explain the other secondary storage devices.

- Homework assignment (5 minutes)

Attempt Ex. B (2) pg. 21, D pg. 22, E pg. 23

#### Period 4:

- Reading and explanation (35 minutes)

Explain software and its types.

- Homework assignment (5 minutes)

Attempt Ex. A (2, 3, 4, 5), C pg. 21



## EXERCISE-2

### Hardware and Software

#### A. Answer the following questions:

1. What is hardware? Give any five examples.

Hardware is made up of the parts of the computer that you can touch i.e. its physical components. Example

1. Keyboard.
2. Motherboard.
3. RAM
4. CD drive.
5. Hard disk.

2. What are software programs? Write down their names.

Software is the program, instructions and data that controls the operations of a computer and enables the computer to carry out a task. These are two types of software.

1. System software
2. Application software.

3. Write down a note on an operating system.

Operating System or OS is the software that communicates with computer hardware on the most basic level. Without an operating system, no programs can run. It allocates memory, processes tasks, accesses disks and serves as the user interface.

4. Why do we use application software? Write names of any two application software.

We use application software to perform a task. Examples are web browsers, word processors, games and utilities.

5. What are Graphics Programs?

Graphics programs are used to design different objects on the computer, change the colour and shape of pictures, perform animations etc.



## Hardware and Software

### B. Give differences between the following:

1. RAM and ROM

#### RAM

- i) RAM is an internal memory chip
- ii) Contents of RAM are lost when computer is turned off.

#### ROM

- ROM holds data permanently.
- Contents of ROM are not lost when computer is turned off.

2. CD and DVD

#### CD

- i) A CD can store 700 MB data.
- ii) A CD stores programs and data.

#### DVD

- A DVD can store 25 times more data than CD.
- A DVD is mostly used to store full length audios or videos.

### C. Fill in the blanks:

1. A computer is the combination of hardware and software.
2. Read Only Memory stores data or instructions that need to be permanent.
3. The most common Operating System is Microsoft Windows.
4. A Compact Disk is a secondary storage device.
5. To create a letter or report we use word processing Software.
6. Freehand and Photoshop are Graphics Software.
7. Students can also write report cards of their exams in MS-Word.
8. Word Processing Software allows us to write letters on computer.



## Hardware and Software

### D. Write T for True or F for False statements:

1. Hardware is the computer's memory. F
2. A computer is useless without software. T
3. The motherboard is placed inside the system unit. T
4. All the computers must have Operating System. T
5. Hard Disk is used for storing data. T
6. Windows is an Operating System for personal computers. T
7. All the different lists of instructions are called hardware. F
8. Tables cannot be made in MS-Word. F
9. Once the data is entered in a Spreadsheet, it cannot be changed. F
10. Graphics Software are used to calculate results. F

### E. Tick (✓) the correct answer:

1. The most common type of system software is:
  - a. Application Software
  - b. Operating System ✓
  - c. Word Processing Software
2. Scanner is an
  - a. Input Device ✓
  - b. Processing Device
  - c. Output Device
3. Microprocessor is a(n)
  - a. Input Device
  - b. Processing Device ✓
  - c. Output Device
4. Word Processor can
  - a. Show Results
  - b. Write Letters ✓
  - c. Write Bills



## Hardware and Software

5. Spreadsheet can calculate
- a. Bake food
  - b. Exam Results ✓
  - c. Playgrounds

### Activity

Make a PowerPoint presentation on 'Advantages of data storage devices'. You can take help from the internet, other books and magazine to collect the relevant information.

### Activity / Test sheet based on Unit 2

- 1) Answer the following questions:

- a. What is motherboard?

Ans. The main circuit board on which the microprocessor is fixed is called motherboard.

- b. Explain secondary memory and its types.

Ans. Secondary memory is used to store data permanently. Its types are hard disk, CD, DVD and USB drives.

- c. List advantages of data storage devices.

Ans. The advantages of data storage devices are large storage space, easy transfer of data, easy to change data.

- d. List the measuring units of data.

1 byte	=	8 bits
1 KB	=	1024 bytes
1 MB	=	1024 KB
1 GB	=	1024 MB
1 TB	=	1024 GB

- e. What are the other names of USB drive?

Ans. A USB drive is also called flash drive, pen drive or thumb drive.

- f. Name the latest storage disc. What is its capacity?

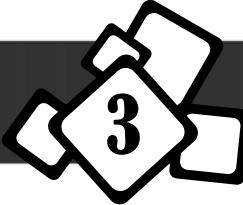
Ans. Blu-ray is the latest storage disc. It has a storage capacity of 25 GB.



## Hardware and Software

- 2) Expand the following:

- a. ROM
  - b. RAM
  - c. BIOS
  - d. KB
  - e. MB
  - f. GB
  - g. TB
  - h. CD-ROM
  - i. CD-R
  - j. CD-RW
  - k. DVD
- Read Only Memory
  - Random Access Memory
  - Basic Input Output System
  - Kilobyte
  - Megabyte
  - Gigabyte
  - Terabyte
  - Compact Disc - Read Only Memory
  - Compact Disc – Recordable
  - Compact Disc – Rewritable
  - Digital Versatile Disc



## COMPUTER ARITHMETIC



### Teaching Objectives:

The objectives of this unit are to:

- Explain the theory of computer arithmetic
- Explain the conversion of decimal to binary
- Explain the procedure of binary arithmetic (addition, subtraction, multiplication and division)

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain the theory of computer arithmetic
- Convert decimal to binary
- Perform binary arithmetic (addition, subtraction, multiplication and division)

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain the theory of computer arithmetic and ASCII.

- Homework assignment (5 minutes)

Attempt Ex. A (1) pg. 32

#### Period 2:

- Reading and explanation (10 minutes)

Explain the conversion form decimal to binary.

- Classroom activity (25 minutes)

Attempt Ex. A (3) pg. 32

- Homework assignment (5 minutes)

Attempt Ex. A (2), B pg. 32

#### Period 3:

- Reading and explanation (10 minutes)

Explain the addition and multiplication of binary numbers.

- Classroom activity (25 minutes)

Attempt Ex. A (4) pg. 32

- Homework assignment (5 minutes)

Attempt Ex. C pg. 32



## COMPUTER ARITHMETIC

### Period 4:

- Reading and explanation (10 minutes)

Explain the subtraction and division of binary numbers.

- Classroom activity (25 minutes)

Attempt Ex. A (5) pg. 32

- Homework assignment (5 minutes)

Revise the chapter.

### EXERCISE-3

#### A. Answer the following questions:

1. What is ASCII ?

ASCII stands for American Standard Code for Information Interchange.

It is the most popular code in which the characters are coded in 8 bits.

These are used to communicate with the computer.

2. What is the Binary Number System?

Processing inside the computer is done using the binary code. The computation inside the computer takes place using binary code which is either 0 or 1.

3. Convert the following base ten numbers into binary codes:

a. 8

$$\begin{array}{r} 2 \mid 8 \\ 2 \mid 4 - 0 \\ 2 \mid 2 - 0 \\ \hline 1 - 0 \end{array}$$

8 = 1000

b. 5

$$\begin{array}{r} 2 \mid 5 \\ 2 \mid 2 - 1 \\ \hline 1 - 0 \end{array}$$

5 = 101

c. 10

$$\begin{array}{r} 2 \mid 10 \\ 2 \mid 5 - 0 \\ 2 \mid 2 - 1 \\ \hline 1 - 0 \end{array}$$

10 = 1010

d. 7

$$\begin{array}{r} 2 \mid 7 \\ 2 \mid 3 - 1 \\ \hline 1 - 1 \end{array}$$

7 = 111

4. Add the following binary numbers:

a. 1010 + 1001

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

b. 1101 + 1111

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



## COMPUTER ARITHMETIC

c.  $101011 + 10110$

$$\begin{array}{r}
 101011 \\
 + 10110 \\
 \hline
 1000001
 \end{array}$$

d.  $1011 + 10110$

$$\begin{array}{r}
 1011 \\
 + 10110 \\
 \hline
 100001
 \end{array}$$

5. Subtract the following binary numbers:

a.  $1100 - 1011$

$$\begin{array}{r}
 1100 \\
 - 1011 \\
 \hline
 0001
 \end{array}$$

b.  $1101 - 1001$

$$\begin{array}{r}
 1101 \\
 - 1001 \\
 \hline
 0100
 \end{array}$$

c.  $1111 - 1000$

$$\begin{array}{r}
 1111 \\
 - 1000 \\
 \hline
 0111
 \end{array}$$

d.  $1011 - 1000$

$$\begin{array}{r}
 1011 \\
 - 1000 \\
 \hline
 0011
 \end{array}$$

**B. Write the correct spelling:**

1. BINNARY \_\_\_\_\_ BINARY \_\_\_\_\_

2. DEECIAML \_\_\_\_\_ DECIMAL \_\_\_\_\_

3. ASSCII \_\_\_\_\_ ASCII \_\_\_\_\_

4. CICRUIT \_\_\_\_\_ CIRCUIT \_\_\_\_\_

**C. Fill in the Power of 2's and their equalities?**
**RULE**

Power of 2      Means      Equals

$2^0$       1

1

$2^2$        $2 \times 2$

4

$2^3$        $2 \times 2 \times 2$

8

$2^5$        $2 \times 2 \times 2 \times 2 \times 2$

32



## COMPUTER ARITHMETIC

**Activity / Test sheet based on Unit 3**

1) Answer the following questions.

a. Define the following:

i)

Data  
Numbers, symbols and words are stored in the computer and processed. These are called data.

ii)

Transistor  
Transistor is a two state device which can be put either on or off by passing an electric current through it.

iii)

Binary code  
The codes (0, 1) are known as binary codes.

iv)

Bit  
Any one digit of the binary code, either 0 or 1 is called a bit.

b. Name any two number system used by the computer.

Ans. Binary number system, Hexadecimal number system

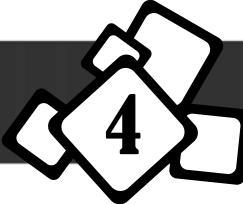
c. Expand the following:

i) ASCII American Standard Code for Information Interchange

ii) Bit Binary Digit

iii) Byte Binary Term

2) The teacher can give questions of binary conversion and arithmetic, similar to the ones mentioned in the book.



## FORMATTING IN MS WORD 2010



### Teaching Objectives:

The objectives of this unit are to:

- Explain the purpose of tabs.
- Explain the options present in Font group on Home tab
- Explain the options present in Paragraph group on Home tab

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain the purpose of tabs.
- Apply options present in Font group on Home tab
- Apply options present in Paragraph group on Home tab

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (15 minutes)

Explain the purpose of tabs. Briefly explain the options present in Font group on Home tab

- Classroom activity (20 minutes)

Attempt Activity pg. 45

- Homework assignment (5 minutes)

Attempt Ex. E, F pg. 45

#### Period 2:

- Reading and explanation (15 minutes)

Explain the options present on pgs. 36 - 37.

- Classroom activity (20 minutes)

Attempt Activity (2-1) pg. 46

- Homework assignment (5 minutes)

Attempt Ex. A (1) pg. 43, C pg. 44

#### Period 3:

- Reading and explanation (15 minutes)

Explain the options present on pgs. 38 - 40.

- Classroom activity (20 minutes)

Attempt Activity (2-4) pg. 46

- Homework assignment (5 minutes)

Attempt Ex. A (2, 3, 4) pg. 43, B pg. 44



#### Period 4:

- Reading and explanation (15 minutes)

Explain the options present on pgs. 40 - 43.

- Classroom activity (20 minutes)

Attempt Activity (2-2, 2-3) pg. 46

- Homework assignment (5 minutes)

Attempt Ex. A (5, 6) pg. 43, D pg. 44

## EXERCISE-4

#### A. Answer these questions:

1. Name the types of text effects.

Text effects are Glow, Reflection, Shadow.

2. How do you remove any formatting style in Ms Word?

Text effects can be removed by applying the following steps:

1. Select the text.

2. On Home tab, in the Font group, click Clear Formatting.

3. What is bold, italics and underline?

Text is made bold to make it appear darker than the normal text. Text can also be italicized to make it appear slanted. Underlining the text puts a line below it.

4. What is the difference between superscript and subscript?

The character slightly below the normal text is called subscript. The character slightly above the normal text is called superscript.

5. Write steps to add bullets to list.

Follow these steps to add bullets to list.

1. Select the list.

2. Click on drop-down arrow of the bullets command.

3. Choose the type of bullet you want.

4

## Formatting in Ms Word 2010

6. What are the types of alignment in MS Word? How do you align a paragraph towards right?

Text can be aligned in four ways:

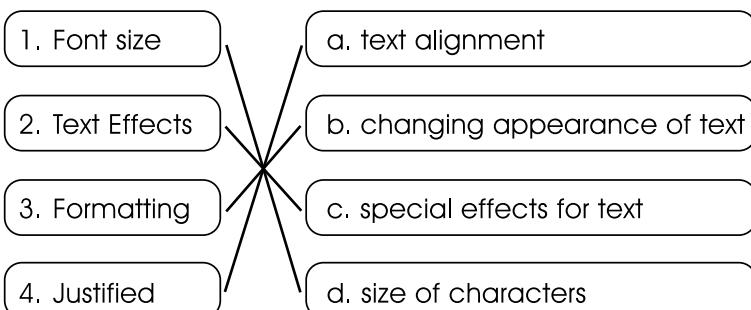
1. Left aligned – aligned with the left margin.
2. Right aligned – aligned with the right margin.
3. Center aligned – aligned to the center of left and right margins.
4. Justified – aligned with both left and right margins.

To align the paragraph to right, select the paragraph and click on the Right alignment option in Paragraph group .

### B. Tick (✓) the correct answer:

1. The Font and Text Effects commands are present in the
  - a. Font group ✓
  - b. Paragraph group \_\_\_\_
  - c. Clipboard group \_\_\_\_
2. Which one is not a text effect option?
  - a. Glow \_\_\_\_
  - b. Table ✓
  - c. Shadow \_\_\_\_
3. Which option is used to increase the size of the font?
  - a. Shrink Font \_\_\_\_
  - b. Blow up Font \_\_\_\_
  - c. Grow Font ✓
4. Which one of the following refers to the arrangement of text?
  - a. Bullets \_\_\_\_
  - b. Alignment ✓
  - c. Superscript \_\_\_\_

### C. Match the columns:



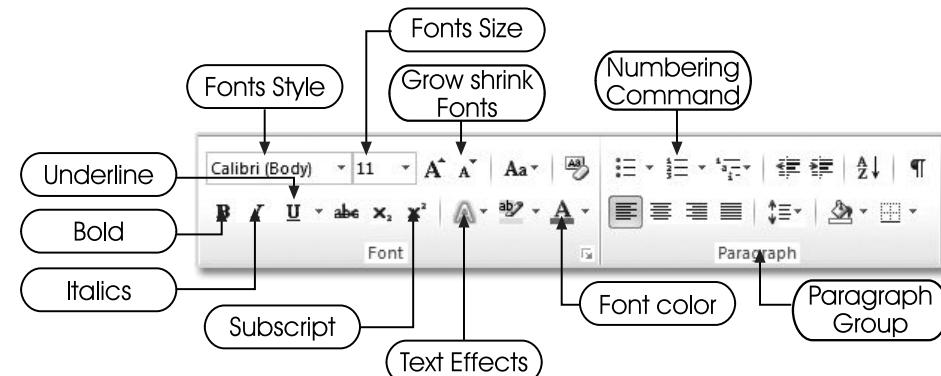
4

## Formatting in Ms Word 2010

### D. Write T for True or F for False statements:

1. Reflection is a type of font. F
2. We have different types of underline styles in MS Word. T
3. Center-aligned text is aligned with the left margin. F

### E. Label the commands:



Note for teachers: Refer to pictures on pages 34, 37.

### F. Identify the following buttons from the Ribbon:



Note for teachers: Refer to picture on page 34.

4

## Formatting in Ms Word 2010

### Activity

#### 1. Create a document as shown. Apply formatting effects.

STEPS:



**Respect others**

Font: Calibri, Font size: 30,  
Text effect: Shadow

**Be obedient**

Font: Comic Sans MS, Font size: 20,  
Text effect: Predefined

**Be humble**

Font: Times New Roman,  
Font size: 18,  
Text effect: Glow orange

**Be honest**

Font: Arial Black,  
Font size: 14,  
Text effect: Reflection

#### 2. Do the following in MS Word:

1. Do the following:
  - a. Type your name, phone number and address. Select the address and change its font, color and size as you like
  - b. Select the name and highlight it.
  - c. Apply text effects to your phone number.
2. Create a bulleted list of at least 8 means of transport. Change this list into a numbered list.
3. Make a numbered list of the subjects you are taught in school this year. Italicise and underline your favourite subjects.
4. Write a paragraph on 'Charles Babbage' and format the text as you like. Also, set the paragraph alignment as justified. Compare with that of your friends.

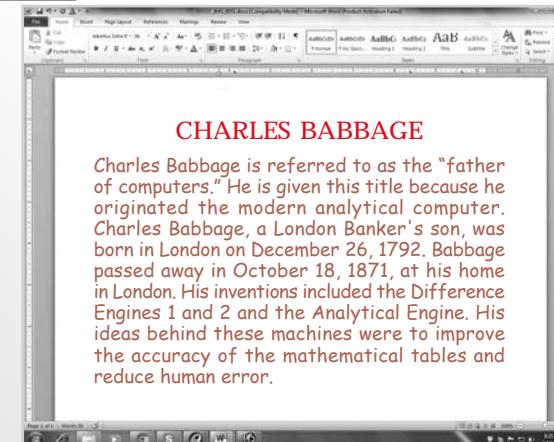
**Means of Transport**

- ❖ Truck
- ❖ Airplane
- ❖ Boat
- ❖ Jeep
- ❖ Motorcycle
- ❖ Horse cart

4

## Formatting in Ms Word 2010

### Activity



#### CHARLES BABBAGE

Charles Babbage is referred to as the "father of computers." He is given this title because he originated the modern analytical computer. Charles Babbage, a London Banker's son, was born in London on December 26, 1792. Babbage passed away in October 18, 1871, at his home in London. His inventions included the Difference Engines 1 and 2 and the Analytical Engine. His ideas behind these machines were to improve the accuracy of the mathematical tables and reduce human error.

#### Activity / Test sheet based on Unit 4

- 1) Answer the following questions.
  - a. Define Ribbon.
- Ans. Ribbon is the professional term for Microsoft Word toolbar and is a part of many Microsoft programs.
- b. Name the tabs present in MS Word.
- Ans. File, Home, Insert, Page Layout, References, Mailings, Review and View.
- c. Define the following :
  - i) Character
- Each letter, number or symbol used in a text document is called a character.
- ii) Font
- A character designed in a particular way is called font.
- iii) Alignment
- Arrangement or position of the text on the page is called Alignment.
- d. Which option is used to copy the formatting to another portion of the text? In which group is it present?
- Ans. Format Painter option in Clipboard group is used to copy the formatting to another portion of the text.



## MORE ON MS POWERPOINT



### Teaching Objectives:

The objectives of this unit are to:

- Explain the process of starting MS PowerPoint
- Explain the use of Design tab, Transitions tab, Animations tab

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain the process of starting MS PowerPoint
- Work on the options of Design tab, Transitions tab, Animations tab

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (20 minutes)

At first revise MS PowerPoint options learnt in class 4. Then explain Design tab.

- Classroom activity (15 minutes)

Design a presentation - Activity (2) pg. 55.

- Homework assignment (5 minutes)

Attempt Ex. A (2) pg. 54

#### Period 2:

- Reading and explanation (10 minutes)

Explain Transitions tab.

- Classroom activity (25 minutes)

Design a presentation - Activity (2) pg. 55.

- Homework assignment (5 minutes)

Attempt Ex. A (3) pg. 54

#### Period 3:

- Reading and explanation (15 minutes)

Explain Animations tab and features of a good presentation.

- Classroom activity (20 minutes)

Activity (3) pg. 55.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 4) pg. 54



## More on MS Powerpoint

#### Period 4:

- Reading and explanation (15 minutes)

Explain Creating a presentation using an existing presentation and printing a presentation.

- Classroom activity (20 minutes)

Activity (1) pg. 55.

- Homework assignment (5 minutes)

Attempt Ex. A (5), B pg. 54

## EXERCISE-5

#### A. Answer the following questions:

1. Write a few features of a good presentation.

A presentation should have a Title Slide stating the topic of presentation.

A Content Slide should follow the Title slide.

The text on each slide should be minimum and meaningful.

Maintain one concept per slide.

Choose a clear font style.

2. What is the function of Design tab?

Design Tab helps us to put colorful backgrounds to our slides.

3. Explain about Transitions tab.

Transitions are the effects which determine how a slide would appear or disappear from the screen during the presentation. Putting sound and visual effects at the time of slide changeover is performed by the Transitions Tab.

4. Write the steps to animate the text on a slide.

The points mentioned below should be followed while animating text on a slide.

1. Click on the text of your slide in the Slide Pane.

2. The text box will become visible.



3. The stars on the Animations tab will also get active.
  4. Hover on different animation options.
  5. Choose any one by clicking on it.
  6. Repeat the same procedure for other slides.
5. How will you print your presentation?

The points mentioned below should be followed when printing a presentation.

1. Click on the File button.
2. Click on Print.
3. Specify the range of printing – generally we choose All.
4. Select what to print.
5. Specify the number of copies.
6. Click on Print button.

**B. Tick (✓) the correct answer:**

1. Handouts are made for the benefit of the
  - a. Audience ✓
  - b. Speaker \_\_\_\_\_
  - c. I don't know \_\_\_\_\_
2. A good presentation has
  - a. The introduction and the content slides \_\_\_\_\_
  - b. The content and the concluding slides \_\_\_\_\_
  - c. The concluding and the acknowledgement slides \_\_\_\_\_
  - d. All of the above ✓
3. The background of a slide should be
  - a. In contrast to the text color ✓
  - b. Colorful and bright \_\_\_\_\_
  - c. Of flowers \_\_\_\_\_
4. We should have points on each slide.
  - a. Five to six ✓
  - b. Eight to ten \_\_\_\_\_
  - c. Two \_\_\_\_\_

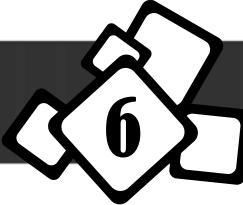


### Activity

1. **Count the number of choices that you have on the Design Tab, the Transitions Tab and the Animation Tab. List them. Observe their effects.**
2. **Design a presentation to present the Uses of Computers. Let it be of a total of six slides with the following details:**
  1. First slide should be the Title slide introducing the topic.
  2. Second slide should mention the different places of use.
  3. Third and fourth slides should give examples of how it is used in the places that you have mentioned above.
  4. The fifth slide should give your conclusions.
  5. The sixth slide should give names of reference material that you have consulted.
3. **Use the design, transition and animation effects that you have learnt in this chapter / lesson.**

### Activity / Test sheet based on Unit 5

- 1) Prepare a presentation on the following topics and apply all the options learnt in classes 4 and 5:
  - a. Hardware and Software
  - b. Types of computer
  - c. My school



## INTRODUCTION TO MS EXCEL 2010



### Teaching Objectives:

The objectives of this unit are to:

- Explain the parts of MS Excel 2010
- Explain the types of data entered in MS Excel
- Explain the process of opening, closing and saving a workbook
- Explain how to enter data in MS Excel

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain the parts of MS Excel 2010
- Explain the types of data entered in MS Excel
- Open, close and save a workbook
- Enter data in MS Excel

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (30 minutes)

Explain the parts of MS Excel 2010 screen, starting and closing MS Excel.

- Classroom activity (5 minutes)

Activity pg. 64

- Homework assignment (5 minutes)

Attempt Ex. D (2) pg. 73.

#### Period 2:

- Reading and explanation (20 minutes)

Explain the types of data entered in MS Excel.

- Classroom activity (15 minutes)

Activity (1) pg. 74.

- Homework assignment (5 minutes)

Attempt Ex. D (1, 4, 5, 6) pg. 73.

#### Period 3:

- Reading and explanation (20 minutes)

Explain Selecting cells, rows and columns.

- Classroom activity (15 minutes)

Let students practice the options.

- Homework assignment (5 minutes)

Attempt Ex. A, B pg. 72.



## Introduction to MS Excel 2010

### Period 4:

- Reading and explanation (15 minutes)

Explain Auto Fill option.

- Classroom activity (20 minutes)

Activity (2, 3) pg. 74.

- Homework assignment (5 minutes)

Attempt Ex. C, D (3) pg. 73.

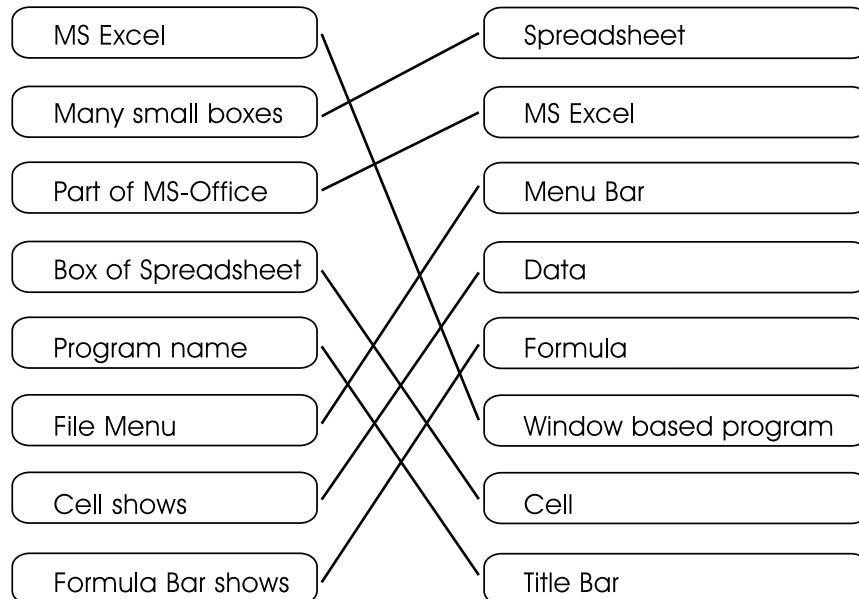
## EXERCISE-6

### A. Tick (✓) the correct answer:

1. B5 is a
  - a. row number \_\_\_\_\_
  - b. cell reference  ✓
  - c. column number \_\_\_\_\_
2. Workbooks are saved with an extension
  - a. .xslx \_\_\_\_\_
  - b. .xsxl \_\_\_\_\_
  - c. .xlsx  ✓
3. You can move downwards in a column by pressing the
  - a. Enter key  ✓
  - b. Tab key \_\_\_\_\_
  - c. Ctrl key \_\_\_\_\_
4. Which of the following is not a type of data stored in MS Excel?
  - a. Number \_\_\_\_\_
  - b. Text \_\_\_\_\_
  - c. Box  ✓
5. The data entered in an active cell is also shown in the
  - a. Status bar \_\_\_\_\_
  - b. Formula bar  ✓
  - c. Title bar \_\_\_\_\_

### B. Fill in the blanks:

1. A spreadsheet / Worksheet shows data in rows and columns.
2. The shortcut keys for creating a new workbook is ctrl + N.
3. MS Excel file is a workbook .
4. Name box displays the address of the active cell.
5. A new workbook contains three worksheets.
6. The contents of a cell can also be edited in the formula bar.

**C. Cross match the following:****A. Answer the following questions:**

1. How many columns and rows are present in a worksheet?

Ans. 16384 columns and 1048576 rows are present in a worksheet.

2. Write the main parts of MS Excel window.

Ans. The main parts of MS Excel window are:

1. Quick Access Toolbar
2. Ribbon
3. Name box
4. Row heading
5. Column heading
6. Status bar
7. Sheet tabs
8. Formula bar
9. Scroll bar



3. How do you save a file in MS Excel?

Ans. Follow these steps to save a file in MS Excel.

1. Click on File tab.

2. Click on Save option.

3. Click on File name option and enter name of the file.

4. Click on Save button.

4. What is the difference between a worksheet and a workbook?

Ans. Workbooks are containers for one or more worksheets. Workbook is like a book and worksheet is like a page in a book.

5. Give the total number of cells in a worksheet.

Ans. The total number of cells in a worksheet are 17,179,869,184.

6. What is the difference between a worksheet and a spreadsheet?

Ans. Worksheet is like a page in a book. Spreadsheet is the software that allows to create workbooks.

**Activity****Do the following activities:**

1. Enter the following table in a worksheet.

Player name	First innings	Second innings
Shoaib Malik	89	44
Misbah ul Haq	65	42
Muhammad Hafiz	76	78
Wahab Riaz	35	42
Shahid Afridi	65	45
Umar Akmal	43	48
Umar Gul	23	22

**Activity**

- a. Correct the spelling of Hafiz to 'Hafeez'
- b. Change the first inning runs of Umar Gul from '23' to '45'.
2. Using the Auto Fill option, fill the serial number for the players in a single column of a worksheet before the Name column (refer table of activity 1).
3. Using the Auto Fill option, fill the days of week in a single row of a worksheet.

**Activity / Test sheet based on Unit 6**

1. Ask students to label the screen given on pg. 57.
2. Prepare worksheet to enter the following details of 10 students
  - a. Name
  - b. Father's name
  - c. Address
  - d. Telephone number

**Teaching Objectives:**

The objectives of this unit are to:

- Learn how to enter text and numbers in MS Excel
- Learn how to align, edit, delete, replace, clear data in MS Excel
- Learn how to move and copy cell contents
- Explain how to apply formula

**Learning Outcomes:**

After completing the unit, students will be able to:

- Enter text and numbers in MS Excel
- Align, edit, delete, replace, clear data in MS Excel
- Move and copy cell contents
- Apply formula

**Number of allocated periods: 4****Period 1:**

Sample lesson plan for a 40- minute period

- Reading and explanation (20 minutes)

Explain Entering data (Text, Numbers, Dates and Times).

- Classroom activity (15 minutes)

Let the students practise whatever is learnt.

- Homework assignment (5 minutes)

Attempt Ex. A(1, 3, 4) pg. 82.

**Period 2:**

- Reading and explanation (15 minutes)

Explain editing, replacing and deleting data in cells.

- Classroom activity (20 minutes)

Let the students practise whatever is learnt.

- Homework assignment (5 minutes)

Attempt Ex. A (6) pg. 82.

**Period 3:**

- Reading and explanation (10 minutes)

Explain moving and copying cells.

- Classroom activity (25 minutes)

Let the students practise whatever is learnt.

- Homework assignment (5 minutes)

Attempt Ex. A (2) pg. 82.

**Period 4:**

- Reading and explanation (10 minutes)
- Explain Addition and Subtraction.
- Classroom activity (25 minutes)
- Let the students practise whatever is learnt.
- Homework assignment (5 minutes)
- Attempt Ex. A (5), B pg. 82, C pg. 83.

**EXERCISE - 1****A. Answer the following questions.**

1. How do you enter data into an MS Excel worksheet?

Ans. Data can be entered by following these steps:

1. Select the cell in which you want to enter the data.
2. Type the desired data in the cell and press Enter key.
  
2. How can you move or copy cells in MS Excel worksheet?

Ans. To move or copy a cell, follow these steps:

1. Select the cell you want to move or copy.
2. On Home tab, in the Clipboard group. Do any one of the following:
  - a. To move the cell, click Cut button or press Ctrl + X.
  - b. To copy the cell, click Copy button or press Ctrl + C.
3. Select the cell where you want to paste the cut or copied cell.
4. On Home tab, in the Clipboard group, click Paste button or press Ctrl + V.

3. Write the rules to type the numeric data in your MS Excel sheet.

Ans. Numeric data can be entered by following these steps:

1. Select the cell in which you want to enter the number.
2. Type the desired number and press Enter key.

4. How can we enter numeric data in a cell as text?

Ans. To enter numeric data in a cell as text, use an apostrophe as the first character. The apostrophe will not be displayed or printed. A cell entry starting with apostrophe is always treated as text and cannot be calculated.

5. How can you total the numeric data given in the cells C3, C4, C5, C6, C7, C8, C9, C10, C11, C12?

Ans. The cells can be added by using the following formula:

$$= (C3 + C4 + C5 + C6 + C7 + C8 + C9 + C10 + C11 + C12) \text{ or } =\text{SUM}(C3 :C12)$$

6. What are the places where editing of the cell can be done?

Ans. The cell contents can be edited at two places. In the cell or in the Formula bar.

**B. Fill in the blanks:**

1. MS Excel belongs to a group of computer applications known as Spreadsheets or Worksheets that display data in the form of rows and columns.
2. The highlighted text is replaced by whatever you type .
3. A Worksheet is basically used for calculation / manipulation purposes.
4. We can put formulae in the Formula bar .
5. When you enter 7-11, MS Excel displays 11 July .

**C. Write True (T) or False (F) after each statement:**

1. MS Excel makes character calculations. F
2. A cell may contain upto 355 characters. F
3. MS Excel is mainly used for numeric calculations. T

4. A Worksheet is used for writing letters. F
5. A formula can be put in the cell. T
6. A formula can be put in the Formula bar. T
7. Addition of data can be performed in MS Excel Worksheet. T
8. Subtraction of data cannot be performed in MS Excel Worksheet. F
9. A Workbook contains Worksheets. T
10. The purpose of Backspace and Delete is same. F

**Activity / Test sheet based on Unit 7**

1) Answer the following questions.

a. Which key is pressed to enter a line break?

Ans. Press Alt + Enter to enter a line break.

b. Which key is pressed to return the cell to its previous state?

Ans. Esc key is pressed to return the cell to its previous state.

c. Write the steps to delete the contents of a cell. Does it remove formatting applied to that cell?

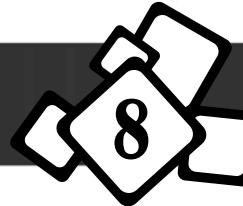
Ans. To delete data:

1. Select the cell that contains the data you want to delete.
2. Press Delete key.

Deleting the cell contents does not remove formatting applied to that cell.

d. What does clearing mean?

Ans. To clear means removing the cell contents, cell formatting and clearing comments.

**Teaching Objectives:**

The objectives of this unit are to:

- Explain the types of computer languages
- Explain the function of a translator

**Learning Outcomes:**

After completing the unit, students will be able to:

- Explain the types of computer languages
- Explain the function of a translator

**Number of allocated periods: 4**

**Period 1:**

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain languages and machine language.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 2) pg. 88

**Period 2:**

- Reading and explanation (35 minutes)

Explain binary alphabets.

- Homework assignment (5 minutes)

Attempt Ex. E pg. 89.

**Period 3:**

- Reading and explanation (35 minutes)

Explain Assembly language.

- Homework assignment (5 minutes)

Attempt Ex. A (3), B pg. 88

**Period 4:**

- Reading and explanation (30 minutes)

Explain High level languages.

- Classroom activity (5 minutes)

Attempt Ex. D pg. 89

- Homework assignment (5 minutes)

Attempt Ex. A (4, 5), C pg. 88

## EXERCISE-8

**A. Answer the following questions.**

1. What are the languages in which you can communicate with a computer?

Ans. BASIC, COBOL, Java, ASP, C++, FORTRAN, VBScript and RPG are some popular languages used for operating and programming in the computers.

2. Write the concept of Machine Language.

Ans. The language composed of binary language is called Machine Language. The programs designed in Machine Language are very difficult to read and write.

3. Why did you use Assembly Language?

Ans. It is easier for programmers to write programs in assembly language as it is a combination of binary language and mnemonic codes.

4. What is the working of a translator?

Ans. A Translator is needed to translate programs written in assembly language or high level language into machine language.

5. Write a short note on High Level Language.

Ans. A high level language is one in which English alphabets, numbers and codes are used. It is very easy to read, write and understand programs written in a high level language. It is not understood by the computer directly.

**B. Write True or False after each statement:**

1. Language is a medium through which we express our thoughts. True

2. There are two codes known as binary codes, 0 and 1 where 0 represents ON while 1 represents OFF. False

3. The language composed of the binary codes is called machine language. True

4. Assembly language is a combination of binary and mnemonic codes. True

**C. Match with the right definitions:**

Assembly language is a combination of

A high-level language is one in which

Latest computers can understand the

English alphabets, numbers and codes are used.

machine language which is difficult for us to read and write.

binary language and "Mnemonic Codes".

**D. Match the following:**

FORTRAN

COBOL

Interpreter

Mnemonic Codes

Translates High Level language program into Machine Language

Language for Scientific Programs

Certain codes understood by the computer

Business Application

**E. Write binary conversion of these alphabets:**

a. T 01010100

b. Z 01011010

c. W 01010111

d. Q 01010001

**Activity / Test sheet based on Unit 8**

1) Answer the following questions.

a. What is language?

Ans. Language is a medium through which we express our thoughts.

b. What does 0 and 1 represent? What is it called?

Ans. 0 represents OFF position while 1 represents ON. These are called binary codes.

c. Which language is most difficult for humans to read and write?

Ans. The machine language is most difficult for humans to read and write.

d. What is the function of assembler?

Ans. An assembler is a special program needed to convert assembly language program to machine language.

e. State purpose of the following languages:

- |            |                       |
|------------|-----------------------|
| a. COBOL   | Business applications |
| b. FORTRAN | Science related work  |
| c. BASIC   | Common areas          |

f. Name the three translators.

Ans. The three translators are computer, interpreter and assembler.

2) Let the students find binary conversion of their name, father's name, school name using the table given on pg. 86.

**Teaching Objectives:**

The objectives of this unit are to:

- Explain algorithm and how to write algorithm.
- Explain flowchart, purpose of flowchart symbols, general rules of drawing flowcharts, their advantages.
- Explain looping.

**Learning Outcomes:**

After completing the unit, students will be able to:

- Explain algorithm and how to write algorithm.
- Explain flowchart, purpose of flowchart symbols, general rules of drawing flowcharts, their advantages.
- Explain looping.

**Number of allocated periods: 4****Period 1:**

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain problem solving, its examples and algorithm.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 2, 3) pg. 97

**Period 2:**

- Reading and explanation (15 minutes)

Explain flowchart and its symbols.

- Classroom activity (20 minutes)

Attempt Activity 1 pg. 95.

- Homework assignment (5 minutes)

Attempt Ex. A (4), B pg. 97

**Period 3:**

- Reading and explanation (20 minutes)

Explain advantages and rules of flowcharts, conditional problem solving.

- Classroom activity (15 minutes)

Attempt Activity 2 pg. 95.

- Homework assignment (5 minutes)

Attempt Ex. A (5), C pg. 97

**Period 4:**

- Reading and explanation (15 minutes)  
Explain looping and the activity given on pg. 96.
- Classroom activity (20 minutes)  
Attempt Activity 1 pg. 98.
- Homework assignment (5 minutes)  
Attempt activities pg. 98

**EXERCISE - 9****A. Answer these questions.**

1. What is problem solving?

Ans. Whatever activity a human being or machine do for achieving a specific objective is called problem solving. In problem solving, logic is the most important thing.

2. Give any two examples of problem solving.

Ans. Given below are a few examples of problem solving.

- i) If you are watching a news channel on the TV and you want to change it to sports channel, you need to do something i.e. move to that channel by pressing that channel number.
- ii) On Monday morning, a student is ready to go to school but yet he / she has not picked up those books and copies which are required as per timetable. So picking up books and copies as per timetable is problem solving.

**Note for teachers:** The students can write any valid example.

3. Explain need of an algorithm.

Ans. Algorithms are used to define steps for calculations and processing of data. Without algorithm, it will become difficult to get the work done.

4. What is flowchart? Why do you think we need flowcharts?

Ans. A flowchart is a diagrammatic representation of a problem and its solution. It illustrates the order of steps to perform a specific task.

5. Write a short note on advantages of using flowcharts.

Ans. Given below are the advantages of using a flowchart.

- i) Communication: A flowchart can be used as a better way to communicate the logic of a system.
- ii) Effective analysis: A flowchart of a problem is used for effective analysis of the problem.
- iii) Documentation of program / system: Program flowcharts are a vital part of a good program documentation.
- iv) Efficient program maintenance: With the help of flowcharts maintenance becomes easier.
- v) Coding of the program: Writing code while referring to the flowchart of the solution is easy.

**B. Write the name and use of each flowchart shape given below:**

1.  Terminal Start / Stop Box

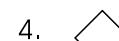
Use : Indicates the starting or ending of the program, process or a flowchart.

2.  Connector

Use: Allows the flowchart to be drawn without intersecting lines or without a reverse flow.

3.  Process Box

Use: Indicates any type of internal operation inside the processor or memory.

4.  Decision Box

Use: Used to ask a question that can be answered in a binary format (Yes / No, True / False)

**C. Tick (✓) the correct answer:**

1. The step-by-step instruction of performing a task to get a work done is called  
a. algorithm. ✓    b. output. \_\_\_\_\_    c. input. \_\_\_\_\_
2. A pictorial representation of the order of steps to perform a particular task is called a  
a. pie chart. \_\_\_\_\_    b. flowchart. ✓    c. loop. \_\_\_\_\_
3. The direction of flow in a flowchart is from  
a. top to bottom. \_\_\_\_\_    b. left to right. \_\_\_\_\_    c. both a and b ✓
4. The boxes in a flowcharts are connected by  
a. lines \_\_\_\_\_    b. arrows ✓    c. dashes. \_\_\_\_\_
5. The shape of a process box is a  
a. rectangle. ✓    b. diamond. \_\_\_\_\_    c. circle. \_\_\_\_\_

**Activity**

❖ Draw a flowchart to calculate the product of any two numbers and print the product only if it is greater than 25. Write the logical steps that you would take for calculating the product first. Now convert the steps into a flowchart.

❖ Put the following activity of calling and talking on a phone in a flowchart with correct symbols.

1. Start
2. Pick up the receiver
3. Check if there is a dial tone.
4. If there is a dial tone, dial the number.
5. Say "hello" and talk to your friend.
6. Finish the conversation put the receiver down.
7. If there is no dial tone, put the receiver down.
8. Start again.
9. Stop.

**Activity / Test sheet based on Unit 9**

- 1) Answer the following questions.

a. Define the following:

i) Algorithm.

The step by step instruction of performing a task is called an algorithm.

ii) Loop

A sequence of instructions that is repeated is called a loop.

- b. Which symbols are used for different operations?

Ans. The following symbols are used for

i) + for addition

ii) - for subtraction

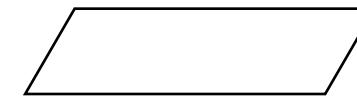
iii) \* for multiplication

iv) / for division

v) ← for assignment

- c. Draw flowchart symbols for the following tasks:

i) Input / Output box



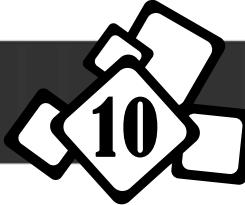
ii) Flow lines



- d. List the general rules followed while drawing a flowchart.

Given below are the general rules followed while drawing a flowchart.

- i) The direction of flow in a flowchart is either from top to bottom or from left to right.
- ii) Arrowheads are used to indicate the direction of the flow of actions.
- iii) A flowchart should have only one start and one stop box.



## INTERNET AND E-MAIL



### Teaching Objectives:

The objectives of this unit are to:

- Explain Internet, its uses
- Explain important terms linked with Internet
- Explain e-mail, its advantages, its working
- Demonstrate creating an e-mail account, sending and reading messages

### Learning Outcomes:

After completing the unit, students will be able to:

- Explain Internet, its uses
- Explain important terms linked with Internet
- Explain e-mail, its advantages, its working
- Create an e-mail account, send and read messages

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain Internet, how it works and advantages.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 6) pg. 110

#### Period 2:

- Reading and explanation (35 minutes)

Explain the important terms pgs. 101 - 103.

- Homework assignment (5 minutes)

Read the chapter.

#### Period 3:

- Reading and explanation (20 minutes)

Explain e-mail, its advantages, how it works.

- Classroom activity (15 minutes)

Attempt Ex. B, C pg. 110, F pg. 112.

- Homework assignment (5 minutes)

Attempt Ex. A (2, 3, 4) pg. 110



## Internet and E-mail

### Period 4:

- Reading and explanation (15 minutes)

Explain creating an e-mail account, sending and reading messages.

- Classroom activity (20 minutes)

Activities pg. 112.

- Homework assignment (5 minutes)

Attempt Ex. A (5, 7) pg. 110, D,E pg. 111

## EXERCISE-10

### A. Answer these questions:

1. What is Internet?

Ans. Internet is a worldwide collection of computer networks. The computers on the Internet can communicate because they are physically linked and share a common protocol called TCP/IP.

2. What is an e-mail?

Ans. Electronic mail or e-mail is a system of sending and receiving messages electronically over a computer network.

3. Name three email service providers. In which one do you have your account?

Ans. Gmail, Yahoo mail, Hotmail are the three free email service providers.  
I have an account on Gmail / Yahoo mail / Hotmail.

4. Write the advantages of an e-mail.

Ans. E-mail has many advantages. Some are:

1. Sending an e-mail to someone is very easy. It can be sent very quickly.

2. E-mails can be sent anytime and anywhere in the world.

3. Files and images can be sent as attachments.

4. Multiple copies of a message can be sent to a group of people.

5. If an e-mail is not delivered, you receive a notification explaining the problem.
  6. E-mails can be prepared in advance and saved until you are ready to send them.
  7. You can include your signature
  5. How do we protect our e-mail account?
- Ans. We protect our e-mail account by choosing a password that cannot be guessed easily.
6. Write a short note on some uses of the Internet.

Ans. Some uses of the Internet

1. looking for jobs.
2. Learning a foreign language.
3. Making friends from any part of the world.
4. See the latest photographs of your favourite movie stars.

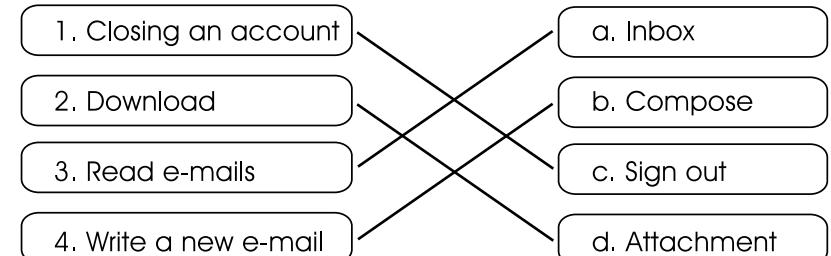
**Note for teachers:** Students can write any point given on pg 100.

7. Where do we type the mail address of the recipient of our e-mail?
- Ans. We type the mail address of the recipient of our e-mail in the box marked 'To'.

#### B. Tick (✓) the correct answer:

1. To protect your e-mail, you need to have
  - a. A password
  - b. A keyword \_\_\_\_\_
  - c. A unique address \_\_\_\_\_
2. After we have checked our mail, we
  - a. Sign in \_\_\_\_\_
  - b. Sign out
  - c. I don't know \_\_\_\_\_
3. Your e-mail address is also your
  - a. Surname \_\_\_\_\_
  - b. Username
  - c. First name \_\_\_\_\_
4. To create a new e-mail account, we
  - a. Sign in \_\_\_\_\_
  - b. Sign out \_\_\_\_\_
  - c. I don't know

#### C. Match the columns:



#### D. Name these icons and write one use of each:

1. Google Chrome: A program that runs on Internet connected computer and provides access to www resources.
2. Go back one page: Shows the page previously visited.
3. Attachment: An attachment is a file sent with an e-mail message. An attachment can be a document, a movie, a sound file, a document, or any other file that requires another program to open it.
4. Downloads: Displays the list of downloaded documents.
5. Deleted: The selected files are deleted.

#### E. Which button or option will you choose to perform these tasks?

**Tick (✓) the correct answer:**

1. To open a new account  Sign in /  Create an account
2. To send a copy of the e-mail to others  Reply /  Forward

**10****Internet and E-mail**

3. To view the received e-mails

 /  4. To save a copy of the attached file in  /    
your computer

5. To remove unwanted e-mails

  / **F. Give one example of each of the following:**

1. E-mail address

idala@gmail.com / any valid address

2. A website that provides free e-mail service

Gmail / Yahoo mail / Hotmail

3. Web browser

Google Chrome / Internet Explorer

**Activity**

- ☛ Create your e-mail account with the help of your teacher.
- ☛ E-mail your birthday invitation to your friends.

**Activity / Test sheet based on Unit 10**

1) Answer the following questions:

a. List the things needed to access Internet.

Ans. The following things are needed to access Internet:

- i) Computer
- ii) Internet Service Provider (ISP)
- iii) Communications path
- iv) Communications software
- v) Communications equipment

b. Define the following:

i) Browsing:

The process of navigating among the documents is called browsing.

**10****Internet and E-mail**

ii) Client

The computer that is requesting for some service from another computer is called the client.

iii) Home page

The document that serves as the initial point of entry is called home page.

iv) Web

A collection of documents interlinked by hyperlinks is called web.

v) URL

A URL (Uniform Resource Locator) is a type of Internet address.

2) Expand the following:

- |           |                             |
|-----------|-----------------------------|
| a. ISP    | Internet Service Provider   |
| b. HTML   | Hypertext Markup Language   |
| c. E-mail | Electronic mail             |
| d. http   | Hypertext Transfer Protocol |
| e. URL    | Uniform Resource Locator    |
| f. www    | World Wide Web              |

## FUN WITH STICKFIGURE ANIMATION - PIVOT



### Teaching Objectives:

The objectives of this unit are to:

- Explain how to start Pivot Animator
- Identify the parts of Pivot Animator window
- Explain how to play different animations

### Learning Outcomes:

After completing the unit, students will be able to:

- Start Pivot Animator
- Identify the parts of Pivot Animator window
- Play different animations

**Number of allocated periods: 4**

#### Period 1:

Sample lesson plan for a 40- minute period

- Reading and explanation (35 minutes)

Explain how to start Pivot Animator, the parts of Pivot window and the uses of animation.

- Homework assignment (5 minutes)

Attempt Ex. A (1, 2, 3) pg. 116

#### Period 2:

- Reading and explanation (10 minutes)

Explain animations on pgs. 114-115.

- Classroom activity (25 minutes)

Practise the activities.

- Homework assignment (5 minutes)

Attempt Ex. A (4, 5) pg. 116

#### Period 3:

- Classroom activity (35 minutes)

Attempt activity pg. 117.

- Homework assignment (5 minutes)

Attempt Ex. B pg. 116

#### Period 4:

- Classroom activity (35 minutes)

Attempt activity pg. 117.

- Homework assignment (5 minutes)

Practise Pivot.

## EXERCISE-11

### A. Answer these questions:

1. What is an animation? Name two animated movies.

Ans. Animation is an optical illusion. It involves creating a look of movement by quick succession of still pictures one after the other.

Names of animated movies are Finding Nemo, The Lion King, Beauty and the Beast etc.

2. Write the steps to open Pivot.

Ans. Given below are the steps to open Pivot.

1. Click on Start.
2. Click on All Programs.
3. Click on Pivot Animator.

3. Name the different parts of Pivot window.

Ans. Different parts of Pivot window are:

1. Menu bar
2. Frame Pane
3. Control buttons
4. Main frame

4. What do you understand by the term 'looping'?

Ans. Looping means to perform the same task again and again. In Pivot, it means to keep playing again and again.

5. What are the uses of animation?

Ans. The uses of animation are:

1. For fun and entertainment
2. For education
3. In games
4. In movies



## Fun with Stickfigure Animation - Pivot

### B. Tick (✓) the correct answer:

1. Animation that plays again and again is called
  - a. Looped ✓
  - b. Laced \_\_\_\_\_
  - c. Tied \_\_\_\_\_
2. Frame by frame animation is called
  - a. Stop motion animation ✓
  - b. Pivot animation \_\_\_\_\_
  - c. Serial animation \_\_\_\_\_
3. Germination of a seed can be shown by animation.
  - a. Correct ✓
  - b. Incorrect \_\_\_\_\_
  - c. May be possible \_\_\_\_\_
4. The files created in Pivot end with
  - a. .pptx \_\_\_\_\_
  - b. .piv ✓
  - c. .fla \_\_\_\_\_

### Activity

- ❖ Observe as many animations as you can.
- ❖ Draw atleast Four frames of movements of a clock ticking.
- ❖ Draw a stickman waving his hand.

### Activity / Test sheet based on Unit 11

Ask students to practise animations.