

Teaching Objectives:

The objectives of this unit are to:

- Explain the evolution of computing devices
- List characteristics of different generations of computer
- Explain the types of computer

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the phases through which computer has evolved
- List the basic features of generations of computer
- Explain the types of computer

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ♦ If they are given any question involving calculations, what can they do?
- ♦ What is the main difference between a calculator and a computer?
- ♦ What are the basic features of a computer?

- Reading and explanation (25 minutes)

Discuss section 1.1 in which the first calculating device abacus and others that followed are explained. The students should be able to understand that the computer they see nowadays was not available in the beginning. It has passed through various phases to reach this form.

- Classroom activity (5 minutes)

Attempt Q.1(a) page/ 12

- Homework assignment (5 minutes)

Do Q.1 (b-d) page/ 12

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 1.2 in which the electronic computers' evolution is discussed.

- Classroom activity (5 minutes)

Attempt Q.3 page/ 11

- Homework assignment (5 minutes)

Attempt Q.1 pages/ 10-11

Teaching Objectives:

The objectives of this unit are to:

- Explain the terms computer, hardware, software, data and information
- Explain the way a computer functions, its characteristics and applications
- List and explain the devices connected to the computer

Learning Outcomes:

After completing the unit, students will be able to:

- Define the terms computer, hardware, software, data and information
- Explain the way a computer functions, its characteristics and applications
- List and explain the devices connected to the computer

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If they are asked to solve a question, which steps will they follow?
- ❖ What are the inputs needed to make milk shake? How is it prepared and its result?
- ❖ Think of some more examples to explain input, process and output.

- Reading and explanation (25 minutes)

Discuss 2.1, 2.2 and 2.3 in which the definition of computer with respect to input, processing and output will be explained. The examples of real life examples involving the three steps will be given like ingredients needed to prepare milk shake, its processing and the result. Students will think of more examples. Data and information will be explained with respect to input, process and output.

- Classroom activity (5 minutes)

Attempt Q.3(c) page/ 24

- Homework assignment (5 minutes)

Do Q.2 (a) page/ 24

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 2.4 in which the terms hardware and software and their types are discussed in detail.

- Classroom activity (5 minutes)

Attempt Q.1(a-d) pages/ 23 -24

- Homework assignment (5 minutes)

Attempt Q.2 (e) and Q.4 page 24

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 2.5 in which the computer memory and its types are discussed in detail.

- Classroom activity (5 minutes)

Attempt Q. 1, 2 pages/ 22-23

- Homework assignment (5 minutes)

Attempt Q.2 (d), Q.3 (a, b) page/ 24

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 2.6, 2.7 and 2.8 in detail.

- Classroom activity (5 minutes)

Attempt Q. 3 page/ 23

- Homework assignment (5 minutes)

Attempt Q.1 page/ 23 and Q.2 (b, c) page 24

Suggested answers to unit 2 questions
Formative Assessment (on page 22)

1) Write True or False:

- | | | | |
|------|------|------|------|
| a. F | e. F | i. T | m. T |
| b. T | f. F | j. T | n. T |
| c. F | g. F | k. F | o. T |
| d. T | h. F | l. F | |

2) Fill in the blanks:

- a. Hardware
- b. byte
- c. external or auxiliary memory
- d. Software
- e. binary
- f. Programmable
- g. output
- h. Electrically Erasable

3) Write full forms of the following:

- a. CU– Control Unit
- b. ALU – Arithmetic Logic Unit
- c. MU – Memory Unit

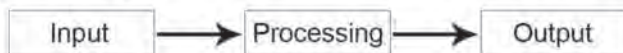
- d. RAM– Random Access Memory
- e. ROM – Read Only Memory
- f. PROM – Programmable Read Only Memory
- g. EPROM- Erasable Programmable Read Only Memory
- h. EEPROM – Electrically Erasable Programmable Read Only Memory

Summative Assessment (on page 23)**1) Tick the correct option:**

- a. compute
- b. hard and ware
- c. External memory
- d. bit

2) Answer the following questions:**a. Define a computer system with the help of a block diagram.**

Ans. A computer is defined as an electronic machine that accepts an input, stores and processes it and gives an output. It is explained with the help of the following block diagram.

**b. Write some important characteristics of computer.**

Ans. The characteristics of a computer are:

- i. Speed: Computers can process data at a fast pace.
- ii. Accuracy and Reliability: Computers are very perfect in performing calculations. Due to their consistent performance, they are reliable in operation.
- iii. Large Storage Capacity: Computer can store large amount of data in a short space.
- iv. Continuous operation: Computer can work tirelessly without a break.

c. Briefly discuss some applications of computer.

Ans. Applications of computer are:

- i. In schools for helping students in learning various topics.
- ii. In companies, to maintain accounts and records of employees.
- iii. In homes, for entertainment and learning.

d. Explain the two types of computer memory.

Ans. The two types of computer memory are:

i. Primary memory:

Also known as Internal or Main memory, it is placed on the motherboard and is used to store data used for current processing.

ii. Secondary memory:

Also known as External or Auxiliary memory, this is used to store data and programs needed for future processing. The speed of data access is slower than primary memory.

e. Explain the term computer software. How does it differ from hardware?

Ans. Software means computer programs that are needed to run the computer hardware. It cannot be touched or felt unlike hardware which can be touched, seen and felt.

3) Differentiate between the following:**a. RAM and ROM****RAM:**

- ◆ Stands for Random Access Memory
- ◆ Used to store user data and programs
- ◆ Volatile memory meaning data stored once is erased when computer is turned off.

ROM:

- ◆ Stands for Read Only Memory
- ◆ Used to store booting instructions
- ◆ Non-volatile memory meaning data stored is permanent and is not deleted when computer is turned off

b. PROM, EPROM and EEPROM**PROM:**

PROM stands for Programmable Read Only Memory. It can be programmed once only.

EPROM:

EPROM stands for Erasable Programmable Read Only Memory. Its contents can be erased and programmed repeatedly by exposing it to ultraviolet light from an EPROM program burner.

EEPROM:

EEPROM stands for Electrically Erasable Programmable Read Only Memory. Its contents can be erased and rewritten by using electric charge.

c. Data and Information**Data:**

Data are raw facts and figures that do not convey any meaning e.g. 29 is data as it does not convey any meaning.

Information:

Processed data is called information. It conveys complete meaning e.g. 29 apples.

4) Write short notes on the following:**a. Hardware:**

Hardware means those parts of a computer which can be touched, seen and felt. e.g. keyboard, mouse, monitor, printer, hard disk, CD, etc.

b. Software:

Software means computer programs that are needed to run the computer hardware. It cannot be touched or felt.

Activity / Test sheet based on Unit 2**1) Answer the following:****a. Define computer peripherals.**

[1]

Ans. A computer has various input and output devices which are collectively called peripherals.

b. What is the function of CPU?

[2]

Ans. CPU works like the human brain and it performs all arithmetic and logical functions.

c. What are the three main parts of CPU? Define them.

[6]

Ans. The three parts are:

♦ **ALU:** stands for Arithmetic Logic Unit. It performs all arithmetic and logical functions.

♦ **CU:** stands for Control Unit. It manages the flow of data between CPU and other peripherals.

♦ **MU:** stands for Memory Unit. It stores input, output and intermediate results.

d. What are the two main types of software? Define them.

[4]

Ans. The two types of software are:

♦ **System software:** It is a set of programs that manages the computer. It works as a bridge between the user and the hardware. e.g. Windows, DOS, etc.

♦ **Application software:** It is designed to perform specific task for the user. The accounting software is an example as it helps the user to perform a specific task.

e. Name any three secondary storage media.

[3]

Ans. Secondary storage media are hard disk, CD and DVD.

f. Fill in the following memory units:

[7]

i. A bit has a value of either 0 or 1.

ii. 1 nibble = 4 bits

iii. 1 byte = 8 bits

iv. 1 KB = 1024 bytes

v. 1 MB = 1024 KB

vi. 1 GB = 1024 MB

vii. 1 TB = 1024 GB

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss the characteristics of generations of computers with special emphasis on GUI, OS and AI.

- Classroom activity (5 minutes)

Attempt Q. 2 page/ 11

- Homework assignment (5 minutes)

Attempt Q.1 (e) Q.2 and Q.4 page/ 12

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss section 1.3 in detail.

- Classroom activity (5 minutes)

Attempt Q. 1 (f) page/ 12

- Homework assignment (5 minutes)

Attempt Q.1 (g, h) Q.3 page/ 12

**Suggested answers to unit 1 questions
Formative Assessment (on page 10-11)**

1) Write True or False:

- | | | |
|------|------|------|
| a. T | e. T | i. T |
| b. F | f. F | j. F |
| c. T | g. T | k. F |
| d. T | h. T | l. F |

2) Fill in the blanks:

- a. German
- b. ship
- c. five
- d. Laptop
- e. Minicomputer
- f. Super computers

3) Write full forms of the following:

- a. ENIAC – Electronic Numeric Integrator And Calculator
- b. EDVAC – Electronic Discrete Variable Automatic Computer
- c. IBM – International Business Machines
- d. EDC – Electronic Digital Computer

Summative Assessment (on page 12)**1) Answer the following questions:****a. Explain the origin of the word Abacus and working of Abacus in brief.**

Ans. Abacus was the first calculating device developed in China that was used to perform calculations. It consists of a rectangular frame with several fixed rods having movable beads. Numbers are represented by positioning beads in different places.

b. Write the components of a slide rule.

Ans. The components of a slide rule are:

- i. Scales
- ii. Metal window
- iii. Cursor
- iv. Sliding bar
- v. Fixed bar

c. Who is called the 'Father of Modern Computers'?

Ans. Charles Babbage is called the 'Father of Modern Computers'.

d. What were the five concepts of Analytical Engine that became the basis of modern computers?

Ans. Analytical Engine's basic five concepts are:

- i. An input device
- ii. A storage facility to hold numbers for processing
- iii. A processor
- iv. A control unit to direct the tasks to be performed
- v. An output device

e. Write about computer generations. Which generation is based on IC?

Ans. First generation computers (1940 – 1952)

- ◆ Used vacuum tubes
- ◆ Consumed a lot of electricity
- ◆ Generated a lot of heat
- ◆ Used binary language for programming
- ◆ Limited speed and versatility
- ◆ E.g. Mark 1

Second generation computers (1952 – 1964)

- ◆ Smaller, faster and cheaper than first generation computers
- ◆ Used transistors

- ◇ Consumed less power
- ◇ Used high level language for programming like COBOL, etc.
- ◇ E.g. IBM series

Third generation computers (1964 – 1971)

- ◇ Smaller, cheaper and more reliable than second generation computers
- ◇ Used ICs
- ◇ Operating system made them user-friendly
- ◇ Used BASIC language for programming
- ◇ E.g. CDC 1700

Fourth generation computers (1971 – till date)

- ◇ More powerful, cheaper, faster, versatile than third generation computers
- ◇ Used microprocessors
- ◇ User-friendly because of GUI
- ◇ E.g. HP 9845

Fifth generation computers (using Artificial Intelligence)

- ◇ will have built-in intelligence taking their own decisions

f. Name the different types of computers in use today.

Ans. Super computer, mainframe computer, minicomputer and micro computer.

g. Where are desktop computers and supercomputers used?

Ans. Desktop computers are used in schools, homes and business. Super computers are used for weather forecasting, space technology and oil exploration.

h. How is a minicomputer different from a desktop PC?

Ans. Minicomputers are referred to as mid range server and support multiple users at the same time. They are suitable for medium sized organizations. PCs are designed to be used by one person at a time and can be used by home users, business and schools.

2) Write a short note on the following:

a. Abacus:

Abacus was the first calculating device developed in China. It was used to count numbers and perform simple calculations like addition and subtraction. It consists of a rectangular frame with several fixed rods having movable beads. Numbers are represented by positioning beads in different places.

b. ENIAC and EDVAC:

Electronic Numeric Integrator And Calculator (ENIAC) was designed for performing calculations involved in missile trajectories used in World War II. It was a general-purpose computer that could compute 1000 times faster than Mark 1.

Electronic Discrete Variable Automatic Computer (EDVAC) was an improvement upon ENIAC and had built-in programs due to presence of more memory.

c. IBM system

International Business Machines (IBM) developed 360 Mainframe Model. It was designed on transistor technology and was available for both commercial and scientific uses.

3) Differentiate between the following:**a. Second generation computers and third generation computers****Second generation computers:**

- ❖ Smaller, faster and cheaper than first generation computers
- ❖ Used transistors
- ❖ Consumed less power
- ❖ Used high level language for programming like COBOL, etc.

Third generation computers:

- ❖ Smaller, cheaper and more reliable than second generation computers
- ❖ Used ICs
- ❖ Operating system made them user-friendly
- ❖ Used BASIC language for programming

b. Supercomputers and Microcomputers**Supercomputers:**

- ❖ Supercomputers are the largest, fastest, most expensive computers.
- ❖ They are based on parallel processing
- ❖ Used in weather forecasting, space exploration

Microcomputers:

- ❖ Microcomputers are smaller in size, slower in processing and cheaper than all types.
- ❖ Designed to be used by one person only
- ❖ Used in homes, schools, business, etc.

4) Arrange the following computing devices in the chronological order:

- a. Vacuum tube b. Microprocessor c. IC**

Ans. Vacuum tube, IC, Microprocessor

Activity / Test sheet based on Unit 1

1) Select the appropriate option.

- a. The first analog computing device of modern ages was Slide Rule.
(Napier's Bones, Pascaline, Slide Rule)
- b. Calculating Clock was based on 6 digits. (4, 6, 7)
- c. The first programmer who worked for Babbage's Difference Engine was Ada Lovelace.
(Blaise Pascal, Herman Hollerith, Ada Lovelace)
- d. Herman Hollerith developed a punch card tabulating machine system.
(punch card, card reader, clock)
- e. Laptop runs on main power supply as well as on inbuilt battery.
(Desktop, Laptop, Tablet PC)

2) Answer the following:

a. Briefly describe Pascaline's calculating machine. [3]

Ans. A French mathematician, Blaise Pascal, devised a machine in 1642 to facilitate his father who was a tax collector. It used gears, dials and a series of numbered wheels. It was the first true calculating machine that could only perform addition and subtraction. Multiplication was performed by repeated addition and division was performed by repeated subtraction.

b. What were the three features of Difference Engine? [3]

Ans. The three features were:

- ◇ It was powered by steam.
- ◇ It was of the size of a car.
- ◇ It could print the results automatically.

c. Who is called the 'Father of Information Processing'? [1]

Ans. Herman Hollerith is called the 'Father of Information Processing'.

d. Define Artificial Intelligence. [2]

Ans. Artificial Intelligence is the technique in which a machine is made to think and take decisions like human beings.

e. Define palmtop computer. [2]

Ans. Palmtop computer is a small hand held computer. It has simplified versions of major software used for other types of PCs. It does not have full sized keyboard but uses special pens and touch screens.

Teaching Objectives:

The objectives of this unit are to:

- Introduce the features of Operating System (OS) and list its examples
- Explain the process of booting
- Explain Windows desktop and its components
- Explain the working of Windows Accessories e.g. Calculator, Paint

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the features of Operating System (OS) and list its examples
- Boot the computer
- Explain Windows desktop and its components
- Work on Windows Accessories

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ What should we do in order to do some work on the computer?
- ❖ What appears on the screen when the computer is opened?

- Reading and explanation (25 minutes)

Discuss 3.1, 3.2 and 3.3 in which the definition of OS - GUI and CUI, is explained. The teacher can revise the term software and its types from chapter 2. The versions and features of Windows and a thorough explanation of booting should be given.

- Classroom activity (5 minutes)

Attempt Q.1 page/ 38

- Homework assignment (5 minutes)

Attempt Q.2 (a-d) page/ 39

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 3.4, 3.5 and 3.6 in which the components of Windows Explorer are explained.

- Classroom activity (5 minutes)

Attempt Q.2 page/ 38

- Homework assignment (5 minutes)

Attempt Q.2 (e, f) page/ 39

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 3.7, 3.8 and 3.9 in which the parts of a window are explained.

- Classroom activity (5 minutes)

Attempt Q. 1 page/ 39

- Homework assignment (5 minutes)

Draw and label a window.

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (15 minutes)

Discuss 3.10 in detail.

- Classroom activity (15 minutes)

Ask the students to perform basic Windows Accessories specially Calculator, Paint, etc. in lab.

- Homework assignment (5 minutes)

Attempt Q. 3 pg. 38

Suggested answers to unit 3 questions
Formative Assessment (on page 38)

1) Write True or False:

- | | |
|------|------|
| a. T | e. F |
| b. F | f. T |
| c. T | g. T |
| d. F | |

2) Fill in the blanks:

- a. Graphical User Interface
- b. Recycle Bin
- c. Icons
- d. Taskbar
- e. Titlebar

3) Write full forms of the following:

- a. OS – Operating System
- b. DOS – Disk Operating System
- c. CUI – Character User Interface
- d. GUI - Graphical User Interface
- e. BIOS - Basic Input Output System

Summative Assessment (on page 39)**1) Tick the correct option:**

- a. An operating system is a software which controls the overall activity of a keyboard / CPU / **computer**.
- b. Windows 95 / 98 / **7** is the latest version of Microsoft Windows.
- c. An arrow - shaped symbol on the screen is known as **mouse pointer** / Internet Explorer / icon.
- d. My Computer icon is normally located on the top **left** / right corner of the screen.
- e. Recycle Bin icon represents a permanent / **temporary** storage area.

2) Answer the following questions:**a. Define an OS. Also give its examples.**

Ans. An operating system is software which controls and facilitates the overall activity of a computer. It acts as an interface between the user and the computer. Its examples are Windows 98, Windows XP, Windows 7, etc.

b. Differentiate between a CUI and GUI based operating system.

Ans. CUI stands for Character User Interface. In this interface, the user needs to type commands to get the work done. It is difficult to learn. GUI stands for Graphical User Interface. In this interface, the user can select icons, the small pictures depicting files, folders and applications, for quick selection. It is easy to learn and program than CUI.

c. List some versions of Windows. Which is the latest version of Windows?

Ans. Windows 95, Windows 98, Windows XP, Windows 7. Windows 7 is the latest version.

d. What do you understand by multitasking?

Ans. Multitasking means performing more than one task at the same time.

e. Discuss the components of a Windows Desktop.

Ans. The main components of a Windows desktop are: (i) Taskbar (ii) Icons

i) Taskbar:

A taskbar is present at the bottom having Start button on extreme left corner, system tray and a number of small icons to represent background applications.

ii) Icon:

Icon is a small picture representing a file, a folder or a program. Windows desktop has the following icons.

a) My Computer: My Computer icon is mostly located on the top left corner of the screen which when clicked, shows the attached drives.

- b) My Documents: My Documents is a default folder that contains files that can be accessed quickly. All the created files are stored in My Documents by default.
- c) Network Neighbourhood: Network Neighbourhood icon is used to view computers and other devices on the network.
- d) Recycle Bin: Recycle Bin icon is used to store the deleted files and folders.

f. Explain Recycle Bin and Taskbar.

Ans. Recycle Bin icon is used to store the deleted files and folders.

A taskbar is present at the bottom having Start button on extreme left corner, system tray and a number of small icons to represent background applications.

Activity / Test sheet based on Unit 3

1) Answer the following:

a. Give one example each of GUI and CUI based OS. [2]

Ans. DOS (Disk Operating System) is an example of CUI while Windows is an example of GUI based OS.

b. What does LAN stand for? Define it. [3]

Ans. LAN stands for Local Area Network. It is a group of interconnected computers and peripherals limited to a small area, typically within a building.

c. Define Internet. Why do we use it? [2]

Ans. Internet is an interconnected network of computers. We use it to find information.

d. Name the software needed to access Internet. [1]

Ans. We may use Internet Explorer to access Internet.

e. Which application helps the user to perform calculations? Which are its two modes? [3]

Ans. Calculator helps the user to perform calculation. Its two modes are Standard and Scientific.

2) Ask the students to draw any picture using Paint. Save the file and set it as wallpaper.

Teaching Objectives:

The objectives of this unit are to:

- Explain the difference between file and folder
- Explain the components of Windows Explorer
- Explain the method to manage files and folders using Windows Explorer

Learning Outcomes:

After completing the unit, students will be able to:

- Differentiate between file and folder
- Explain the components of Windows Explorer
- Manage files and folders using Windows Explorer

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ Where do schools keep the records of their students?
- ❖ How do teachers manage the data of students (attendance, result, etc.)?

- Reading and explanation (25 minutes)

Discuss 4.1 and 4.2 in which the difference between file and folder will be explained with the help of real life examples. Teachers and schools are managing the record of their students manually in the form of file and all the files are kept together at one place to be accessed easily.

- Classroom activity (5 minutes)

Attempt Q.1 page/ 46

- Homework assignment (5 minutes)

Do Q.2 (a, e) page/ 47

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 4.3 in which the components of Windows Explorer are explained.

- Classroom activity (5 minutes)

Attempt Q.3 page/ 46

- Homework assignment (5 minutes)

Attempt Q.2 (c, d) page/ 47

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 4.4 in which the methods employed to manage files and folders through Windows Explorer are explained.

- Classroom activity (5 minutes)

Attempt Q. 2 page/ 46

- Homework assignment (5 minutes)

Attempt Q.2 (b) page/ 47

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Allow the students to practice all these options in lab.

- Classroom activity (5 minutes)

Attempt Q. 1 page/ 47

- Homework assignment (5 minutes)

Practise all the topics of chapters 3 and 4.

Suggested answers to unit 4 questions
Formative Assessment (on page 46)

1) Write True or False:

- | | | | | | | | |
|----|---|----|---|----|---|----|---|
| a. | F | c. | F | e. | T | g. | T |
| b. | F | d. | T | f. | F | h. | F |

2) Fill in the blanks:

- a. extension
- b. files / programs
- c. Windows Explorer
- d. View
- e. Edit
- f. Ctrl or Control
- g. .txt
- h. .doc or .docx
- i. Rename

3) Differentiate between the following:**a. File and Folder:**

A file is used to store data in the form of text, pictures, instructions, etc, while a folder may have a group of files.

b. Title bar and Menu bar

Title bar is the topmost bar of the window and has the name of application. In case of Windows Explorer, the menu bar shows the available options.

c. Left pane and right pane

The left pane shows disk drives, system folders, etc. Some of the icons have + sign indicating that it is expandable. Right pane shows the contents of a folder, i.e. subfolder and files.

Summative Assessment (on page 47)**1) Tick the correct option:**

- a. Windows Explorer is known as folder manager / **File Manager** / System Manager.
- b. Cut button is denoted by a pencil / sharpener / **scissor**.
- c. We use Microsoft Paint program to create a **drawing file** / text file.
- d. If a file name is very big, only the **first** / middle / last few characters are displayed.
- e. Windows Explorer is divided into six panes / three panes / **two** panes.

2) Answer the following questions:**a. Explain file and folder.**

Ans. A file is a place to store data while folder is created to store many files and subfolders.

b. Explain the procedure to create a file and a folder.**Ans. CREATING A NEW FILE:**

In left pane of Windows Explorer, select drive and folder to create a file → Click File menu → Select New → Select the type of file

CREATING A NEW FOLDER:

In left pane of Windows Explorer, select location i.e. drive, folder or subfolder → Click File menu → Select New → Click Folder

c. Explain the difference between Cut and Copy.

Ans. Cut is used to remove a file or folder from its current location and move it to a new location while Copy option is used to create a duplicate of the file or folder.

d. Explain various components of Explorer screen.

Ans. Explorer screen is mainly divided into two panes. The left pane is used to show secondary storage devices and the folders inside them while the right pane shows the contents of the selected drive and folder. Apart from these panes, there are other areas like title bar, which is used to display the name of file and application. The menu bar has many options to choose from. Toolbar has many buttons to perform various tasks. Address bar displays the current working area and status bar shows the free disk space in case a drive is selected and the number of objects in case of a folder.

e. Write the procedure for launching Windows Explorer.

Ans. Click Start → Programs → Windows Explorer

Activity / Test sheet based on Unit 4

1) Answer the following questions:

a. Which precautions must be taken when selecting a filename? [3]

Ans.

- ❖ File name should contain letters and numbers including spaces.
- ❖ Two filenames with same extension cannot exist in the same location.
- ❖ Filename cannot be more than 255 characters.

b. Which characters cannot be included in a filename? [3]

Ans. The following characters cannot be a part of filename:

less than (<), greater than (>), colon (:), semicolon (;), forward slash (/), backslash (\), quotation mark ("), question mark (?), asterisk (*), pipe (|)

c. Differentiate between the following:

i) Folder and Subfolder: [2]

Folder is created on a drive to store many files and subfolders while a subfolder is created inside a folder and may contain files and other subfolders.

ii) Cut – Paste and Copy – Paste [2]

Using Cut and Paste removes text from current location and paste in a new location while using Copy and Paste option creates a duplicate of the selected text.

d. List the steps needed to perform the following tasks:

i) Deleting a file or folder [3]

Select file / folder → Click File menu → Select Delete option → Click Yes

ii) Renaming a file or folder [4]

Select file / folder → Click File menu → Select Rename option → Type new name → Click any blank area of the window

iii) Copying a file or folder [4]

Select file / folder to copy → Click Edit menu / Copy → Open destination drive / folder → Click Edit menu / Paste

iv) Moving a file or folder [4]

Select file / folder to move → Click Edit menu / Cut → Open destination drive / folder → Click Edit menu / Paste

Teaching Objectives:

The objectives of this unit are to:

- Explain the components and basic menus i.e. File, Edit and View menus of MS Word 2003
- Explain how to create, save and open a document
- Explain how to perform various operations like editing text, finding desired text and then replacing it with new text
- Explain how to perform spelling and grammar check

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the components and basic menus i.e. File, Edit and View menus of MS Word 2003
- Create, save and open a document
- Perform various operations like editing text, finding desired text and then replacing it with new text
- Perform spelling and grammar check

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If they are asked to type an application, which software should they use?
- ❖ What is the main difference between writing an application manually and using a computer?

- Reading and explanation (25 minutes)

Discuss 5.1, 5.2 and 5.3 in which the students will be explained the components of MS Word screen.

- Classroom activity (5 minutes)

Label MS Word screen

- Homework assignment (5 minutes)

Attempt Q.2 (a-d) page/ 63

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 5.4 in which the students will be explained the options present in various menus.

- Classroom activity (5 minutes)

Attempt Q.1 pg 62

- Homework assignment (5 minutes)

Attempt Q.2, (e) page/ 63

Period 3:

- Starter activity (5 minutes)

- Reading and explanation (20 minutes)

Discuss 5.5 (Entering, selecting and editing text, Undo/Redo) in detail.

- Classroom activity (10 minutes)

Create a document by typing text. Apply editing and selecting text, Undo/Redo.

- Homework assignment (5 minutes)

Attempt Q.2 page/ 62 and Q.2 (f) page/ 63

Period 4:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 5.5 (Find and Replace), 5.6, 5.7, 5.8 and 5.9 in detail.

Classroom activity (15 minutes)

Perform all these operations in lab.

- Homework assignment (5 minutes)

Attempt Q.2 (g) page/ 63

**Suggested answers to unit 5 questions
Formative Assessment (on page 62)**

1) Write True or False:

- | | | | | | |
|----|---|----|---|----|---|
| a. | F | d. | T | g. | T |
| b. | T | e. | F | h. | T |
| c. | T | f. | T | i. | F |

2) Fill in the blanks:

- word processor
- 2010
- winword
- Formatting
- Tools
- workspace
- editing
- Undo

Summative Assessment (on page 63)**1) Choose the correct answers:**

- a. A word processor is a software.
i. Hardware ii. Software iii. Window
- b. Standard toolbar provides a quick way of performing operations.
i. Menu ii. Formatting iii. Standard
- c. Edit menu has options for editing the contents in the document.
i. File ii. Edit iii. View

2) Answer the following questions:**a. What do you understand by a word processor? Give some examples.**

Ans. A word processor is a software that is used to create a document, add or delete text, copy or move text, save and print a file.

b. What are the different versions of MS Word? Which is the latest version?

Ans. Different versions of Word are : Word 95, Word 97, Word 2000, Word 2003, Word 2010. Word 2010 is the latest version.

c. How do you start MS Word?

Ans. MS Word can be opened by clicking Start button, select Programs and select Microsoft Word.

d. Where is the title bar located in MS Word 2000? Explain its functions.

Ans. Title bar is present at the top of Word window and is the first bar. It shows the name of file and has buttons to minimize, restore and close the active window.

e. Write names of some of the menus of MS Word 2000. Explain File and View menus.

Ans. File, Edit, View, Insert, Format, Tools, Table, Window, Help

File Menu is used to access all those options that are linked to file like creating, saving, printing, opening and closing.

View Menu has the options to change the appearance of Word window. The layout of Word window can be changed. It also has options to display or hide toolbars and insert header and footer.

f. Explain the difference between a pointer and a cursor. While typing in work area, which one is used to know the current typing position?

Ans. A vertical blinking line is called a cursor and is used in the work area while typing text. Pointer is associated with mouse.

- g. Can you close the Word document window without closing MS Word? If yes, then how do you do it?**

Ans. It is possible to close the Word document window without closing MS Word by using Close option in File menu. It asks the user to save the work before closing Word.

Activity / Test sheet based on Unit 5

- 1) Answer the following questions:**

- a. List the features of a word processor.**

[7]

Ans. Features of a word processor are:

- ◆ Creating and saving a document
- ◆ Checking spelling and grammar
- ◆ Editing text using Cut, Copy, Paste options
- ◆ Apply formatting to improve the work presentation
- ◆ Insert pictures or WordArt
- ◆ Print the document

- b. List all the options to open MS Word.**

[6]

Ans. i. Click Start → select Programs → select Microsoft Word
ii. Click Start → select Run → type winword and click OK.
iii. By double clicking Word icon (if present on the desktop)

- c. How can we open a menu without using mouse?**

Explain with the help of an example.

[2+ 2]

Ans. Press Alt key in combination with the underlined letter of the menu options to open corresponding menu. e.g. Pressing Alt and E / e will open Edit menu.

- d. What can you do if you cannot see formatting toolbar on the screen?** [1]

Ans. Click View menu → select toolbar option → click Standard option

- e. Differentiate between Save and Save As option of File menu.**

[2]

Ans. Save option is used to save an already existing and saved file while Save As is used to save the file with a new name or at a different location.

Teaching Objectives:

The objectives of this unit are to:

- Explain the formatting of text using various options in Format menu
- Explain how to insert tables
- Explain how to insert Clip Art and WordArt
- Explain the procedure of printing a document

Learning Outcomes:

After completing the unit, students will be able to:

- Format text using various options in Format menu
- Insert tables
- Insert Clip Art and WordArt
- Print a document

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If they want to improve the presentation of their school work, what do they do?
- ❖ What are the different ways they apply to improve the presentation of their work?

- Reading and explanation (15 minutes)

Discuss 6.1 and 6.2 in which the students will be explained how to format the text using Font option in Format menu. They will also learn how to format paragraph and align text in left, right or centre.

- Classroom activity (15 minutes)

Students will be asked to type the text from their book themselves and apply formatting options.

- Homework assignment (5 minutes)

Attempt Q.3 page/ 78

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 6.3, 6.4 and 6.5 in which the students will be explained how to format text using Borders and Shading, Columns and Bullets and Numbering.

- Classroom activity (15 minutes)

Perform these options in the text they had typed in previous class.

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) page/ 78

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (15 minutes)

Discuss 6.6, 6.7 and 6.8 in detail.

- Classroom activity (15 minutes)

Students will create their class time table using Insert table option. They will also insert WordArt and Clip Art to improve their work presentation.

- Homework assignment (5 minutes)

Attempt Q.1 page/ 77 and Q.1 (c) page/ 78

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (15 minutes)

Discuss 6.9 and 6.10 in detail.

Classroom activity (15 minutes)

Attempt Q.2 page/ 77. Also ask the students to revise the previous topics.

- Homework assignment (5 minutes)

Attempt Q.1 (d, e) and Q.2 page/ 78

Suggested answers to unit 6 questions
Formative Assessment (on page 77)

1) Write True or False:

- | | | | |
|----|---|----|---|
| a. | F | e. | T |
| b. | T | f. | F |
| c. | T | g. | T |
| d. | T | h. | T |

2) Fill in the blanks:

- a. Text alignment
- b. Right
- c. Paragraph
- d. after
- e. Screen
- f. Print Preview

Summative Assessment (on page 78)

1) Answer the following questions:

- a. Why are Bullets and Numbering used?

Ans. If there are several similar points to be listed, the option of Bullets and Numbering

can be used. With Bullets, symbols are displayed while with Numbering, numbers are displayed.

b. Write about the Borders and Shading features in Word.

Ans. Borders are the lines formed around a specific text, paragraphs or the whole page. Shading is a colour or pattern that forms the background of the specified text or paragraph. These options are used to emphasize the text or paragraph in a document.

c. Define a table. What is meant by a cell?

Ans. A table is a collection of rows and columns like the school timetable. A cell is an area that is formed by the intersection of a row and a column.

d. What is the importance of Print Preview?

Ans. Before printing the document, it is better to use Print Preview option to view how the document will look like when printed. This will prevent paper wastage.

e. How do you print multiple copies of a document?

Ans. In order to print multiple copies at the same time, choose File menu → Print option. In the dialogue box that appears select Number of copies option under Copies frame and type the desired number.

2) Write short notes on:

a. Character Formatting:

Character formatting improves the appearance of characters like letters, numbers and special characters. It can be used to make the text bold, italics, underline change font style and font size.

b. Using WordArt:

WordArt is the text drawing tool in Word. It adds text in different colours, styles and formats that are not available with Font option.

c. Print Preview:

Print Preview is used to view how the document will look like when printed. This will prevent paper wastage. It has options to change the margins and orientation of the text.

3) Write difference between the following:

a. Left alignment and Right Alignment:

In Left alignment all the text is aligned with left margin while in Right alignment it is aligned with right margin.

b. Line Spacing and Paragraph spacing:

Line spacing inserts spacing between the lines of a paragraph while Paragraph

spacing is meant to insert spacing before and after the paragraphs.

Activity / Test sheet based on Unit 6

- 1) Ask the students to type any text from their book. Apply the following:**

Bold, Italics, Underline

Change the font size and style (choose any size and style of their choice)

- 2) Create a table using Table menu and prepare their class time table.**

- 3) Answer the following questions:**

- a. Explain the purpose of Change Case. Where is it present? [3]**

Ans. The purpose of Change Case is to change the letters into capital, small, sentence case, capitalize each word or toggle case. This option is present in Format menu.

- b. In how many ways can the text be aligned? Name them. [3]**

Ans. Text can be aligned in four ways namely Left align, Right align, Centre and Justified.

- c. List three ways to remove bullets or numbers. [3]**

Ans. The three ways are:

- ◆ Press Backspace after the bullet or number.
- ◆ Select text and click Bullets or Numbering icon in Formatting toolbar.
- ◆ Select Format menu → Bullets and Numbering → select None

- d. What is Clip Art? [1]**

Ans. Clip Art is a set of pictures which can be inserted in a Word document.

- e. List two ways to insert Clip Art. [2]**

Ans. The two ways are:

- ◆ Click Insert menu → select Clip Art
- ◆ Click Insert Clip Art icon in Drawing toolbar

Teaching Objectives:

The objectives of this unit are to:

- Explain the components of MS Excel 2003
- Enter data and formulae, move around in a worksheet
- Perform various operations like inserting and deleting rows, columns and cells, changing row height and column width

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the components of MS Excel 2003
- Insert data and formulae, move around in a worksheet
- Insert and delete rows, columns and cells, change row height and column width

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ♦ If they are given any arithmetic question, how can they solve it?
- ♦ What is the main difference between solving manually and using a computer?

- Reading and explanation (25 minutes)

Discuss 7.1, 7.2, 7.3 and 7.4 in which the students will be explained the purpose of using electronic workbook, difference between worksheet and workbook, row, column and cell. They will also learn the components of Excel window, cell address and types of data that can be entered in Excel.

- Classroom activity (5 minutes)

Label Excel sheet

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) page/ 89

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss 7.5, 7.6, 7.7 and 7.8 in which the students will be explained the shortcut keys and how to enter the data and formula. They will also learn how to save Excel file.

- Classroom activity (5 minutes)

Attempt Q.1, 2, 3 pages/ 88-89

- Homework assignment (5 minutes)

Attempt Q.2, 3 page/ 90

Period 3:

- Starter activity (5 minutes)
 - Reading and explanation (10 minutes)
- Discuss 7.9, 7.10 and 7.11 in detail.
- Classroom activity (20 minutes)

Create a worksheet to enter two numbers and find their sum. Apply the same with other set of data. Save your file.

- Homework assignment (5 minutes)

Attempt Q.1 (c, d) (Summative Assessment) pages/ 89-90

Period 4:

- Starter activity (5 minutes)
 - Reading and explanation (15 minutes)
- Discuss 7.12, 7.13, 7.14, 7.15 and 7.16 in detail.
- Classroom activity (15 minutes)

Perform all these operations in lab.

- Homework assignment (5 minutes)

Attempt Q.1 (e, f) (Summative Assessment) pages/ 89-90

**Suggested answers to unit 7 questions
Formative Assessment (on pages 88-89)**

1) Write True or False:

- | | | | | | | | |
|----|---|----|---|----|---|----|---|
| a. | F | d. | T | g. | F | j. | T |
| b. | F | e. | F | h. | T | | |
| c. | T | f. | T | i. | F | | |

2) Fill in the blanks:

- a. workbook
- b. worksheet
- c. column
- d. cells
- e. active
- f. Name
- g. range
- h. left

3) Name the following icons.

- a. MS Word
- b. MS Excel
- c. My Computer

Summative Assessment (on pages 89-90)**1) Answer the following questions:****a. What do you understand by a spreadsheet program?**

Ans. A spreadsheet is defined as a large sheet which contains data and information arranged in rows and columns.

b. What are the types of data used in MS Excel worksheet?

Ans. Types of data entered are:

- Labels which is text used for column headings, titles and names.
- Value is anything that has numeric value and can be used in calculations.

c. How do you enter data in MS Excel worksheet?

Ans. Click on the cell for selection, type data and then press Enter key.

d. Write names of some of the menus found in MS Excel.

Ans. File, Edit, View, Insert, Format, Tools, Data, Window, Help.

e. What is the difference between Undo and Redo commands?

Ans. Undo is used to reverse the last action while Redo is to repeat the last action.

f. What are the methods to move selected cells from one place to another?

Ans. i. Select the range of cells to be moved. Click Edit menu → Cut.
Select destination cells → Click Edit menu → Paste
ii. Select the range of cells to be moved. Click Cut icon from the toolbar.
Select destination cells → Click Paste icon from the toolbar

2) Which key / keys, will you press to move the cell pointer?

- | | |
|--------------------------------------|-------------|
| a. one screen up? | Page Up |
| b. one cell left? | Left arrow |
| c. to the last cell containing data? | Ctrl + End |
| d. to cell A1? | Ctrl + Home |
| e. one screen down? | Page Down |

3) Choose the correct answer.

- Spreadsheet** allows us to store information in rows and columns.
i. Spreadsheet ii. Worksheet iii. Workbook
- Excel** aligns values on the right side of a cell and labels on the left.
i. Excel ii. MS Word iii. WordPad
- Left arrow** moves one column left.
i. Right arrow ii. Up arrow iii. Left arrow

- d. **Page Up** moves up on screen.
i. Down arrow ii. Page Up iii. Page Down
- e. **Ctrl+Home** moves to the cell A1.
i. Ctrl+Down arrow ii. Ctrl+Home iii. Home

Activity / Test sheet based on Unit 7

- 1) **Ask the students to create a mark sheet where they will enter names, marks of any 3 subjects. They will use formulae to find marks obtained and percentage.**
- 2) **Create a worksheet to store the daily temperatures for a month. Then find average, minimum and maximum temperatures by using the formulae.**
- 3) **Answer the following questions:**
- a. **What is the rule of writing a formula?** [2]
Ans. The formula must begin with = sign or + sign .
- b. **Name the purpose of these formulae.** [4]
Ans. SUM → to find sum of a range of cells.
AVERAGE → to find average of a range of cells.
MAX → to find maximum value in of a range of cells.
MIN → to find minimum value in of a range of cells.
- c. **How many sheets are present in a work book by default?** [3]
Ans. An Excel workbook contains three sheets by default.

Teaching Objectives:

The objectives of this unit are to:

- Explain the purpose and components of MS PowerPoint 2003 window
- Explain the steps needed to create , save, open and close a presentation
- Explain the steps needed to format the presentation using Background, graphics, etc.

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the purpose and components of MS PowerPoint 2003 window
- Explain the steps needed to create , save, open and close a presentation
- Explain the steps needed to format the presentation using Background, graphics, etc.

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If they need to present their project work, how can they do it?
- ❖ What is the main difference between showing the slides manually and using a computer?

- Reading and explanation (25 minutes)

Discuss 8.1 and 8.2 in which the students will be explained the purpose of preparing a presentation using PowerPoint and the components of its window.

- Classroom activity (5 minutes)

Attempt Q.3 page/ 104 and Q.2 page/ 105

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) page/ 104

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 8.3, 8.6, 8.8 and 8.9 in which the students will be explained how to create, save and view a presentation.

- Classroom activity (15 minutes)

Prepare a presentation regarding any topic e.g. Greenhouse effect

- Homework assignment (5 minutes)

Attempt Q. 2 page/ 103, Q.1 (c, d) page/ 104

Period 3:

- Starter activity (5 minutes)
 - Reading and explanation (15 minutes)
- Discuss 8.4, 8.5 and 8.7 in detail.
- Classroom activity (15 minutes)

Ask the students to open their previously saved presentation and perform the tasks explained. Save the file again.

- Homework assignment (5 minutes)
- Attempt Q.1 page/ 103, Q.1 (e) page/ 104

Period 4:

- Starter activity (5 minutes)
 - Reading and explanation (15 minutes)
- Discuss 8.10 in detail.
- Classroom activity (15 minutes)

Open the presentation saved earlier and perform all the operations explained.

- Homework assignment (5 minutes)
- Attempt Q.1 (f) page/ 104 and Q.3 page/ 105

Suggested answers to unit 8 questions
Formative Assessment (on pages 103-104)

1) Write True or False:

- | | | | |
|------|------|------|------|
| a. T | c. T | e. T | g. T |
| b. F | d. F | f. F | h. T |

2) Fill in the blanks:

- a. title
- b. menu
- c. Formatting
- d. Drawing
- e. Formatting
- f. ppt
- g. 9
- h. Esc key

3) Write names of the following bars.

- a. Title bar
- b. Menu bar
- c. Status bar
- d. Drawing toolbar

Summative Assessment (on pages 104)**1) Answer the following questions:****a. Explain the difference between a slide and a presentation.**

Ans. A presentation is an organized and structured way of displaying information using text, graphics, animation, sounds, etc. and may contain many slides which is a single page of information.

b. How do you start PowerPoint and open a new file?

Ans. To open PowerPoint and a new presentation, follow the following steps:
Click Start → Programs → Microsoft Office → Microsoft PowerPoint

c. Explain the purpose of Formatting toolbar.

Ans. Formatting toolbar contains icons that help in formatting the text in the slide. It helps to change the colour, font style and size, align the text in left, right, centre or justify the text.

d. How do you insert text in a blank PowerPoint slide?

Ans. Click in the box and cursor starts blinking. Type the desired text and click anywhere outside. Another method is to insert a text box and type the contents inside it.

e. Discuss various formatting features in PowerPoint.

Ans. Formatting text can be done using the buttons for changing the colour of font, font size and font style. The text can be changed to bold, italic or underlined as per the need. Alignment of text can be done on left, right or centre of the text box. Bullets or numbers can be inserted to improve the presentation. New slides can be inserted too.

f. Explain the Find and Replace feature in PowerPoint.

Ans. With Find the user can find any desired word in selected slide while Replace option replaces it with the new word.

2) Write the different components of PowerPoint window:

Refer to page/ 94 figure under 8.2 for labelling

3) Write difference between the following:**a. Components of the PowerPoint window and Excel window**

PowerPoint window is divided into panes, Outline pane, Notes pane and Slide pane. It allows the user to work on slides while Excel window is composed mainly of workbook having many worksheets where each sheet is similar to a page. The sheet is composed of cells.

b. Formatting the text and search / replace the text

Formatting involves options that help to change the colour, font style and size, align the text in left, right, centre or justify.

Find option allows the user to find any desired word in selected slide and Replace option replaces it with the new word.

Activity / Test sheet based on Unit 8

- 1) Ask the students to prepare a presentation regarding personal cleanliness and cleanliness of surrounding.
- 2) They should insert another slide in the end to include hadiths regarding the topic.
- 3) They should change background colours of all slides.
- 4) The students can prepare presentation on other topics like Generations of computer, Earth Day, Planets, About classroom and class fellows, etc.

Teaching Objectives:

The objectives of this unit are to:

- Explain the purpose of learning computer language like QBASIC
- Explain how to start, save, run, open a program and quit the application
- Explain how to perform various programming exercises

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the purpose of learning computer language like QBASIC
- Start, save, run, open a program and quit the application
- Design and run programs

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If they are asked to communicate with anyone what do they do?
- ❖ Are there any rules followed to communicate with each other?

- Reading and explanation (25 minutes)

Discuss 9.1, 9.2 in which the students will be explained how to start QBASIC and the various parts of QBASIC screen.

- Classroom activity (5 minutes)

Ask students to draw the screen.

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) page/ 114

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 9.3 in detail with the help of computer and multimedia.

- Classroom activity (15 minutes)

Ask students to save, open an existing program. They will also start a new program. In the end, they will quit the application.

- Homework assignment (5 minutes)

Attempt Q.1 page/ 113, Q.1 (d) page/ 114

Period 3:

- Starter activity (5 minutes)

- Reading and explanation (20 minutes)

Discuss 9.4 in detail explaining the purpose of statements (REM, CLS, PRINT).

- Classroom activity (10 minutes)
Attempt Q. 2 page/ 114
- Homework assignment (5 minutes)
Attempt Q.2 page/ 113 and Q.1 (c) page/ 114

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)
Discuss 9.5 in detail.
- Classroom activity (5 minutes)
Attempt Q. 3 page/ 113 and Q.3 page/ 114
- Homework assignment (5 minutes)
Design programs given in Activity on page 38.

Suggested answers to unit 9 questions
Formative Assessment (on page 113)

1) Fill in the blanks:

- a. bas
- b. Quick Beginner's All-purpose Symbolic Instruction Code
- c. editing screen
- d. *
- e. F5

2) Write full forms of the following:

- a. BASIC Beginner's All-purpose Symbolic Instruction Code
- b. QBASIC Quick Beginner's All-purpose Symbolic Instruction Code
- c. CLS Clear Screen
- d. DM Division and Multiplication
- e. AS Addition and Subtraction

3) Draw the symbols of the following.

- a. * for Multiplication
- b. / for Division
- c. ^ for Exponentiation

Summative Assessment (on page 114)

1) Answer the following questions:**a. What is a program?**

Ans. A program is a set of instructions to perform certain task.

b. Why do we use programming languages? Name some computer programming languages.

Ans. We use programming languages to write a computer program. Some programming languages are BASIC, QBASIC, COBOL, C Language, etc.

c. Explain purpose of the following statements:

Ans. (i) REM → The purpose of REM statement is to write remarks which are ignored by the program and are needed by the programmer.

(ii) CLS → The purpose of CLS is to clear the screen.

(iii) PRINT → It is used to display any message or data on the screen.

d. What are the ways of executing a program?

Ans. A program can be executed in the following ways:

(i) To execute a program, press F5 key.

(ii) Click Run menu → Select Start option.

2) Guess the output of the following PRINT commands:

Commands	Result
a. PRINT "5 + 7"	5 + 7
b. PRINT 5 + 7	12
c. PRINT "My weight is"; 90/3	30
d. PRINT "NIMRA IS MY BEST FRIEND"	NIMRA IS MY BEST FRIEND
e. PRINT 10 * 10 + 10 - 10 / 10	109

3) Tick the correct option:

- A programming language helps you give instructions to the radio / television/ **computer**.
- The status bar at the bottom displays the arrow keys / **function keys** / numeric keys.
- The Print command is used to display data on the **screen** / keyboard / mouse.

Activity / Test sheet based on Unit 9

- Ask the students to create a program to find and display the sum, difference, multiplication and division of any two numbers.
- Display name and marks of three subjects of any student. Find marks obtained and percentage. Display the result.
- Answer the following questions:**
 - Which characters are allowed in QBasic? [3]

Ans. QBasic character set includes:

- i. Numbers 0 - 9
- ii. Alphabets A - Z
- iii. Special characters !, *, ?, @, &, \$, etc

b. Define a keyword. What is another word used for keyword? [2]

Ans. A word that has a special meaning and function for the computer is called a keyword. Another word used in place of keyword is a reserved word.

Teaching Objectives:

The objectives of this unit are to:

- Explain the Internet terms like web browser, web server, http, etc.
- Explain the devices needed to connect to Internet
- Learn the purpose of buttons present in Internet Explorer
- Search desired information using search engine like Google

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the Internet terms like web browser, web server, http, etc.
- List the devices needed to connect to Internet
- Work confidently on Internet Explorer
- Search desired information using search engine like Google

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ What can you do on Internet?
- ❖ If you want to reach your friend's home, what do you need?

- Reading and explanation (25 minutes)

Discuss 10.1 and 10.2 in which the students will learn the applications of Internet. In 10.3, the important terms used on Internet are explained in detail. These terms will explain the difference between website and webpage, home page, web server, web browser, etc.

- Classroom activity (5 minutes)

Attempt Q.1 page/ 125

- Homework assignment (5 minutes)

Attempt Q.1 page/ 126

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 10.4 in which the students will learn how to connect to Internet.

- Classroom activity (5 minutes)

Attempt Q.2, 3 page/ 125

- Homework assignment (5 minutes)

Attempt Q. 2 (a-c) page/ 126

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 10.5 in which the students will learn the various buttons of web browser (Internet Explorer).

- Classroom activity (5 minutes)

Attempt Q. 2 (d) page/ 126

- Homework assignment (5 minutes)

Attempt Q. 3 and 4 page/ 126

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (10 minutes)

Discuss 10.6 and help students learn the use of search engine.

- Classroom activity (20 minutes)

Students will use lab to search desired information.

- Homework assignment (5 minutes)

Attempt Q.2 (e) page/ 126

Suggested answers to unit 10 questions Formative Assessment (on page 125)

1) Write True or False:

- | | | | |
|------|------|------|------|
| a. F | c. F | e. F | g. T |
| b. F | d. F | f. T | h. T |

2) Match the following:

- | | |
|----------------|------------------------------------------------------------------|
| a. WWW | World Wide Web |
| b. Web browser | Software used to access web |
| c. URL | Uniform Resource Locator |
| d. Protocol | Rules established for communication |
| e. Hyperlink | Encoded text or image which when clicked opens a different page. |
| f. Address bar | Part of a web browser for typing the URL |

3) Write full forms of the following.

- | | |
|---------|-----------------------------|
| a. WWW | World Wide Web |
| b. HTML | HyperText Markup Language |
| c. HTTP | HyperText Transfer Protocol |
| d. URL | Uniform Resource Locator |
| e. ISP | Internet Service Provider |

Summative Assessment (on pages 126)

1) **Answer the following questions:**

a. **Name the various uses of Internet.**

Ans. We use Internet for the following reasons:

- ◇ For sending and receiving e-mails
- ◇ Chatting
- ◇ Sharing any information
- ◇ Business
- ◇ For searching information on any topic
- ◇ Social networking

b. **Explain the following terms.**

(i) **URL** (ii) **Web browser**

Ans. URL:

URL stands for Uniform Resource Locator and is another name for website address.

Web browser:

Web browser is an application software that helps in viewing the website.

2) **Answer in short.**

a. **Define Internet and WWW.**

Ans. Internet:

stands for International Network and is a global network accessed by people throughout the world.

WWW:

WWW stands for World Wide Web. It is a collection of websites developed to share information for personal or business purposes.

b. **What do HTTP and HTML mean?**

Ans. HTTP:

HTTP stands for HyperText Transfer Protocol and is a protocol that controls the way hypertext documents are requested and sent by computers.

HTML:

HTML stands for HyperText Markup Language and is the language used to create a webpage. It has commands which are understood by web browsers.

c. **What is a URL?**

Ans. URL stands for Uniform Resource Locator and is another name for website address.

d. What is a web browser? How do you start Microsoft Internet Explorer?

Ans. Web browser is an application software that helps in viewing the website. Click on the icon of Microsoft Internet Explorer present in taskbar or on the desktop to open the application.

e. Write about some applications of Internet.

Ans. i. WWW: WWW stands for World Wide Web. It is a collection of websites developed to share information for personal or business purposes.
ii. e-mail: It is a quick and less expensive method of sending and receiving mails across the entire globe.
iii. chatting: It is an online method of communicating with friends and family members.

3) Write short notes on:

a. Website:

A website is a combination of web pages containing information about any topic like education, sports, business, etc. Some websites provide free facilities like e-mail, searching information and free newspaper. A commercial site ends with .com, educational with .edu, etc.

b. Modem:

Modem stands for MODulator DEModulator. It is a device that helps in converting signals generated by a computer to analog signals to be transferred over the telephone line which are received and then transferred back to digital signals to be understood by the computer.

4) Explain the utility of the following buttons on Standard Toolbar:

- a. Back:** To view the last visited webpage while surfing the Internet.
- b. Forward:** Having browsed many web pages and have reopened many previously opened web pages and want to move to the next visited web page.
- c. Stop:** While browsing if an unwanted web page is opened by mistake, then click Stop button to discontinue opening.
- d. Refresh:** Clicking Refresh button sends a request to the web server to reload the current web page in the browser window.
- e. Home:** Clicking Home button opens the favourite main page or home page.

Activity / Test sheet based on Unit 10

- 1) Ask the students to open browser and then open search engine e.g. Google to find the web pages meeting the search criteria.**

2) **Answer the following:**

a. **What is needed to access Internet?**

[3]

Ans. We need the following to be a part of Internet.

- ◆ A computer system
- ◆ Modem
- ◆ Telephone or cable connection

b. **Define the following:**

[3]

(i) web server (ii) hyperlink (iii) ISP

Ans. (i) **Web server:**

A web server is a powerful computer system that stores web pages and associated files of a website. It sends the document requested by the user.

(ii) **Hyperlink:**

Web pages contain words that are underlined and are in a different colour. It takes the user from one web page to another.

(iii) **ISP:**

ISP stands for Internet Service Provider. It is a company or agency that provides Internet access to users.

c. **Name any three web browsers.**

[3]

Ans. Mozilla Firefox, Internet Explorer, Google Chrome, Netscape Navigator

d. **Which keyboard key is pressed to work as Stop button?**

[1]

Ans. Esc key can be pressed to work as Stop button.

Teaching Objectives:

The objectives of this unit are to:

- Explain the term email and email address
- Explain the steps needed to create an email account
- Learn how to compose and send email
- Learn how to Sign out from email account
- Understand the term net-etiquette

Learning Outcomes:

After completing the unit, students will be able to:

- Explain email and the format of email address
- List the steps needed to create an email account
- Compose and send email
- Sign out from an email account
- Explain the term net-etiquette

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

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- ❖ If you want to send message to a person far away, what do you do?
- ❖ What are the advantages and disadvantages of sending message using computer and Internet?

- Reading and explanation (25 minutes)

Discuss 11.1 in which the concept of email will be explained. Email is a fast method to send and receive messages to people in any part of the world using Internet. In order to send email, a person must possess a unique email account. These are created on any of the web servers available on Internet. The teachers will also discuss the advantages and disadvantages of using email.

- Classroom activity (5 minutes)

Attempt Q.1 (a) (Summative Assessment) page/ 133

- Homework assignment (5 minutes)

Attempt Q.1 (b, c) (Summative Assessment) pages/ 133 - 134

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss 11.2 in which the students will be explained how to create an email account.

- Classroom activity (15 minutes)

The students will create their own email ids on any web servers like Gmail, Yahoo, etc.

- Homework assignment (5 minutes)
- Attempt Q.1 and 2 page/ 133

Period 3:

- Starter activity (5 minutes)
- Reading and explanation (15 minutes)
- Discuss 11.3 and 11.4 in which the students will be explained how to compose an email and Sign out from email account.
- Classroom activity (15 minutes)

The students will compose an email and will send to their friends. They will also learn the difference between cc and bcc.

- Homework assignment (5 minutes)
- Attempt Q.1 (d, e) and Q.3 page/ 134

Period 4:

- Starter activity (5 minutes)
- Reading and explanation (25 minutes)

Discuss 11.5 in detail.

- Classroom activity (5 minutes)

Attempt Q. 1 (f) page/ 134

- Homework assignment (5 minutes)

Attempt Q.1 (g) and Q.2 page/ 134

Suggested answers to unit 11 questions
Formative Assessment (on page 133)

1) Fill in the blanks:

- a. Internet
- b. Uniform Resource Locator
- c. blind carbon copy
- d. Email
- e. attachment
- f. strangers
- g. capital
- h. rude or threatening
- i. checking
- j. never

2) Expand the following:

- a. **ISO** - International Organization for Standardization
- b. **email** - Electronic mail

- c. **edu** - educational
- d. **de** - Deutschland(Germany)
- e. **uk** - United Kingdom
- f. **IP** - Internet Protocol
- g. **ch** - Confoederatio Helvetica (Helvetic Confederation) the Latin name for Switzerland

Summative Assessment (on pages 133 - 134)

1) **Answer the following questions:**

a. **Explain the format of URL.**

Ans. http://en.example.org/Main_Page:

<http://> is the protocol. en.example.org/ is the name of the actual website address while in the end is the actual page that is opened by the user.

b. **What is the format of an email address?**

Ans. niceandsimple@gmail.com:

The beginning is with the email address chosen by the person followed by @ symbol and in the end is the name and type of web server.

c. **Give advantages and limitations of using an email.**

Ans. Advantages of email:

- ❖ Fast and convenient method of sending mails
- ❖ No need to go to the post office
- ❖ Inexpensive method
- ❖ No need to buy stamps or envelopes

Limitations of an email:

- ❖ Not everyone has an email account
- ❖ Problem with hardware will not allow the person to read or write email
- ❖ Problem with electricity

d. **What do you mean by composing an email?**

Ans. Composing an email means writing an email and sending it to the receiver.

e. **Why is it advisable to sign out of your email account properly?**

Ans. Signing out is advisable so that no unauthorized person can access your emails.

f. **What is flame war?**

Ans. A flame war is a heated argument between two individuals, that results in posting personal attacks on each other during debating the topic at hand.

g. Can you think of some more net-etiquettes? Write them in your notebook.

Ans. Some net-etiquettes can be:

- ◆ Treat others as you would like to be treated.
- ◆ Do not send email/messages to strangers.
- ◆ Do not discuss topics which may hurt the sentiments of people.
- ◆ Do not try to cheat people online as it will destroy your reputation.
- ◆ Use proper grammar and spelling.

2) Write short notes on:

a. Email:

Email stands for electronic mail. It is a method of sending and receiving mails using a computer with Internet connection. It is a fast and inexpensive method to send and receive mails from people in any part of the world. Same mail can be sent to many users who have an email id. Apart from composing a mail, we can send documents, pictures and sound.

b. Net-etiquettes:

In real life we are taught by our elders to follow a few rules while performing daily activities. Similarly, while using Internet, we should follow a few rules as we do in our real life. Net-etiquette or netiquette is the term that is used to describe acceptable behaviour on the Internet. Some of the netiquettes are:

- ◆ Be polite and courteous.
- ◆ Never send an email in capital letters. It is considered as shouting.
- ◆ Do not involve in flame war.
- ◆ Keep messages brief.
- ◆ Do not send chain letters through email.

3) Match the following:

- | | |
|-------------|---------------------------------|
| a. Username | (4) Name given by the user |
| b. Email | (3) Username@hostname |
| c. DNS | (2) Worldwide system of servers |
| d. Hostname | (5) Email server name |
| e. Bcc | (1) Blind carbon copy |

Activity based on Unit 11

- 1) Ask the students to create an email account.
- 2) The students should compose an email and send it to their friend telling him / her about activities in school.
- 3) The students should also send the same mail to many friends using cc and bcc.

Suggested Answers to Model Paper Summative Assessment (Units 1-4) on page 48

1) Write True or False:

(7 marks)

- | | | |
|------|------|------|
| a. T | d. T | g. T |
| b. T | e. F | |
| c. F | f. F | |

2) Fill in the blanks:

(10marks)

- | | | |
|----------------|-------------------------|-------------------------|
| a. abacus | e. Read Only Memory | i. 8 |
| b. Chinese | f. Warm boot, cold boot | j. subfolders and files |
| c. Vacuum tube | g. system | |
| d. secondary | h. resource | |

3) Answer the following questions:

(2marks)

a. Name the different types of computers. Briefly explain each.

Ans. The different types of computers are:

Supercomputer, mainframe computer, minicomputer and micro computer
Supercomputer:

Supercomputers are the largest, fastest, most expensive computers. They are based on parallel processing. They are used in weather forecasting, space exploration, etc.

Mainframe computers:

Mainframe computers can support thousands of users and multiple programs at the same time and are sensitive to variations in temperature and humidity, etc. These are used in research organizations, banks and government organizations.

Minicomputers:

Minicomputers are referred to as mid range servers and support multiple users at the same time. They are suitable for medium sized organizations like banks.

Microcomputers:

Microcomputers are smaller in size, slower in processing and cheaper than all types. They are designed to be used by one person only and are used in homes, schools, business, etc.

b. What do you understand by generations of computer? List the characteristics and examples of each.

Ans. First generation computers (1940 – 1952)

- ◆ Used vacuum tubes
- ◆ Consumed a lot of electricity
- ◆ Generated a lot of heat
- ◆ Used binary language for programming
- ◆ Limited speed and versatility
- ◆ e.g. Mark 1

Second generation computers (1952 – 1964)

- ◆ Smaller, faster and cheaper than first generation computers

Suggested Answers to Model Paper Summative Assessment

- ◇ Used transistors
- ◇ Consumed less power
- ◇ Used high level language for programming like COBOL, etc.
- ◇ e.g. IBM series

Third generation computers (1964 – 1971)

- ◇ Smaller, cheaper and more reliable than second generation computers
- ◇ Used ICs
- ◇ Operating system made them user-friendly
- ◇ Used BASIC language for programming
- ◇ e.g. CDC 1700

Fourth generation computers (1971 – till date)

- ◇ More powerful, cheaper, faster, versatile than third generation computers
- ◇ Used microprocessors
- ◇ User-friendly because of GUI
- ◇ e.g. HP 9845

Fifth generation computers (using Artificial Intelligence)

- ◇ Will have built-in intelligence taking their own decisions

c. Define Windows desktop.

Ans. When we start computer the first thing that appears on the screen is desktop. It is the work area which has icons representing a program, folder or a file.

d. What is an Operating System? Explain its basic task.

Ans. An operating system is software which controls and facilitates the overall activity of a computer. It acts as an interface between the user and the computer. Its examples are Windows 98, Windows XP, Windows 7, etc. Its basic task is to manage all the tasks performed in a computer.

e. Enlist the various steps of booting.

Ans. The steps are:

1. When computer is turned on, software called Basic Input Output System (BIOS) runs. It is present in ROM.
2. BIOS conducts Power On Self Test (POST) to make sure that all the computer components including power supply are working properly.
3. BIOS then looks for special boot programs that load OS from hard disk.
4. Once the system files are loaded, OS is ready to take control of the system.
5. OS remains in the computer's memory till power is on.
6. MBR program loads system files into RAM.

4) Write short notes on:

(9marks)

a. Abacus:

Abacus was the first calculating device developed in China. It was used to count

Suggested Answers to Model Paper Summative Assessment

numbers and perform simple calculations like addition and subtraction. It consists of a rectangular frame with several fixed rods having movable beads. Numbers are represented by positioning beads in different places.

b. Mainframe computer

Mainframe computers can support thousands of users and multiple programs at the same time and are sensitive to variations in temperature and humidity, etc. These are used in research organizations, banks and government organizations.

c. Software:

Software means computer programs that are needed to run the computer hardware. It cannot be touched or felt unlike hardware which can be touched, seen and felt. Its two types are system software and application software.

5) Write full forms of the following:

(4marks)

- a. CPU – Central Processing Unit
- b. IC – Integrated Circuit
- c. RAM – Random Access Memory
- d. DOS – Disk Operating System

(Units 5-7) on page 91

1) Write True or False:

(10marks)

- | | | |
|------|------|------|
| a. F | d. T | g. T |
| b. F | e. F | h. T |
| c. T | f. F | i. T |

j. T

2) Fill in the blanks:

(8 marks)

- | | | |
|--------------|-------------|------------------|
| a. Microsoft | d. Undo | g. Print Preview |
| b. 2010 | e. pictures | h. Select All |
| c. Justified | f. address | |

3) Answer the following questions:

(20 marks)

a. How many rows and columns are there in MS Excel 2003 worksheet?

Ans. There are 65,536 rows and 256 columns in MS Excel 2003 worksheet.

b. How is data entered in MS Excel worksheet?

Ans. Select a cell by clicking on it and type data. Excel is in the typing mode. Press Enter key to enter the text typed into the cell.

c. Can you close Word document window without closing MS Word? If yes, then how do you do it?

Ans. It is possible to close the Word document window without closing MS Word by using Close option in File menu. It asks the user to save the work before closing Word.

Suggested Answers to Model Paper Summative Assessment

d. **Why are Bullets and Numbering used?**

Ans. Bullets and Numbering option is used to make the information well organized and easy to understand. When we use Bullets option, a symbol is displayed before the text in each line while with Numbering, numbers are displayed.

4) **Write short notes on:**

(12 marks)

a. **Formatting text:**

Formatting text means to improve the presentation of your work to make it look attractive. The text font can be changed and its size can also be set as per the needs. We can change the text to bold, italics or underline.

b. **Print Preview:**

Print Preview option is present in File Menu and is used to show how data will look like when printed. This will reduce paper wastage.

c. **Worksheet:**

A worksheet is the work area in an Excel workbook which is a grid of rows and columns. The worksheets are named as Sheet1, Sheet2, Sheet3 and so on.

(Units 8-11) on page 135

1) **Write True or False:**

(6 marks)

- | | | |
|------|------|------|
| a. T | c. T | e. T |
| b. F | d. F | f. T |

2) **Fill in the blanks:**

(6 marks)

- | | |
|---------------|------------------------------|
| a. attractive | d. web browser |
| b. Internet | e. HyperText Markup Language |
| c. F5 | f. World Wide Web |

3) **Answer the following questions:**

(20 marks)

a. **How do you start PowerPoint and open a new file?**

Ans. To open PowerPoint and a new presentation, follow the following steps:
Click Start → Programs → Microsoft Office → Microsoft PowerPoint

b. **How are coloured backgrounds used? Explain briefly.**

Ans. Coloured backgrounds are used to make the presentation attractive. In order to perform the task, right click anywhere in the slide. From the menu, click Background. When the dialogue box appears, click the down arrow button and choose any colour and click Apply.

c. **Discuss various formatting features in PowerPoint.**

Ans. Formatting text can be done using the buttons for changing the colour of font, font size and font style. The text can be changed to bold, italic or underlined as per the need. Alignment of text can be done on left, right or centre of the text box.

Suggested Answers to Model Paper Summative Assessment

Bullets or numbers can be inserted to improve the presentation. New slides can be inserted too.

d. What is an email address? Write its format.

Ans. The address chosen and given to an individual once he creates an email account is called email address. One example is:

niceandsimple@gmail.com

The beginning is with the email address chosen by the person followed by @ symbol and in the end is the name and type of web server.

4) Label the following picture:

(8marks)

For QBasic screen, refer to page/ 107, fig. under 9.2

For PowerPoint screen, refer to page/ 94, fig. under 8.2

5) Write short notes on:

(10 marks)

a. Website:

A website is a combination of web pages containing information about any topic like education, sports, business, etc. Some websites provide free facilities like email, searching information and free newspaper. A commercial site ends with .com, educational with .edu, etc.

b. Working with graphics:

To improve the presentation of our work, we can insert pictures using Clip Art or pictures from a saved file, text using Word Art. These pictures enhance the presentation of our work as the impact created by pictures is more than simple text.

c. Net-etiquette

In real life we are taught by our elders to follow a few rules while performing daily activities. Similarly, while using Internet, we should follow a few rules as we do in our real life. Net-etiquette or netiquette is the term that is used to describe acceptable behaviour on the Internet.

d. Web browser:

Web browser is an application software that helps in viewing the website. Its examples are Mozilla Firefox, Internet Explorer, Google Chrome, Netscape Navigator, etc.

Suggested Answers to Model Paper Summative Assessment

- d. **Web browser:**
Web browser is an application software that helps in viewing the website. Its examples are Mozilla Firefox, Internet Explorer, Google Chrome, Netscape Navigator, etc.