

Teaching Objectives:

The objectives of this unit are to:

- Explain the input, output and secondary storage devices; types of software
- Explain the term networking, its advantages and disadvantages and the components needed to create a network
- Explain the types of network, topology and the communication channels

Learning Outcomes:

After completing the unit, students will be able to:

- Describe the purpose and working of input, output and secondary storage devices; types of software
- Define the term networking and list its advantages and disadvantages and the components needed to create a network
- Explain the basic types of network, network topology and the communication channels needed to form a network

Number of allocated periods:4

Period 1:

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- Which was the first calculating device?
- Which is the fastest computer used nowadays and performs precise calculations?
- What are the basic components of a computer?

Note: The above questions are linked with 1.1 – 1.4 which students must have studied in the previous class. This serves as a revision of the previous topics.

- Reading and explanation (25 minutes)

Discuss section 1.5 in which the input devices are explained in detail. The students should be able to understand and explain the purpose of these devices. They should be able to differentiate between their applications easily.

- Classroom activity (5 minutes)

Attempt Q.2 pg. 16

- Homework assignment (5 minutes)

Do Q.1 (a, b, d) pg. 16

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (25 minutes)

Discuss section 1.5 (output and secondary storage) in which the output and secondary storage devices are discussed. Also explain 1.6 (types of software) in detail.

- Classroom activity (5 minutes)

Attempt Q.1 pg. 14-15

- Homework assignment (5 minutes)

Attempt Q.1 (c, e) pg. 16

Period 3:**- Starter activity (5 minutes)****- Reading and explanation (25 minutes)**

Discuss sections 1.6, 1.7 and 1.8.

- Classroom activity (5 minutes)

Discuss Q.3 (a, b) pg. 15 orally

- Homework assignment (5 minutes)

Attempt Q.1 (f, g) pg. 16

Period 4:**- Starter activity (5 minutes)****- Reading and explanation (25 minutes)**

Discuss sections 1.9, 1.10 and 1.11.

- Classroom activity (5 minutes)

Attempt Q. 2 pg. 15

- Homework assignment (5 minutes)

Attempt Q.1 (h) pg. 16 and Q.3 pg. 15

Note: The teachers can complete this chapter in more time than the time mentioned above because of the complexity of topics. They can cut the time short in other chapters or may arrange extra classes for the students.

**Suggested Answers to unit 1 questions
Formative Assessment (on page 14-15)****1) Write True or False:**

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

2) Fill in the blanks:

- | | | | |
|----|--------------|----|-----------------|
| a. | 1930s | f. | wireless |
| b. | vacuum tubes | g. | wired, wireless |
| c. | peripherals | h. | star |
| d. | System | i. | File server |
| e. | Utilities | j. | LAN |

3) Differentiate between the following:**a. LAN and WAN****LAN:**

LAN stands for Local Area Network. The computers are interconnected in a limited geographical area. e.g. network in a building, school or office.

WAN:

WAN stands for Wide Area Network. The computers are interconnected in a large geographical area. e.g. network spread over cities, countries or continents. Internet is the best example of WAN.

b. Star topology and Bus topology**Star topology:**

Star topology is the most commonly used topology. All the workstations are connected to a central connection point called hub.

Bus topology:

Bus topology is made up of a single cable with terminators on both ends. Computers and other devices are connected to this linear cable for communication.

c. Workstation and Server**Workstation:**

Workstation is a computer intended for individual use in a network.

Server:

Server is a computer that manages the network resources, files and software.

d. Compact Disk and Floppy disk**Compact Disk:**

Compact disk is an optical disk meant for storing backup data. It can store data upto 700 MB.

Floppy disk:

Floppy disk is a magnetic medium used to store data for backup and can store upto 1.44 MB.

Summative Assessment (on page 16)**1) Answer the following questions:****a. What is a peripheral device? Give examples of some peripheral devices.**

Ans. All the input, output, processing and storage devices are classified as peripherals. Examples include keyboard, mouse, monitor, hard disk, DVD, etc.

b. Where is a touch screen used?

Ans. Touch screens are widely used at airports, ATMs and other public information systems.

c. Why are secondary storage devices needed?

Ans. Secondary storage devices are needed to read from and write to the corresponding media.

d. Where is MICR normally used and why?

Ans. MICR is normally used in banks to read bank cheques without human intervention.

e. Name the technologies used in different generations.

Ans. First generation computers	Vacuum Tube
Second generation computers	Transistor
Third generation computers	Integrated Circuit
Fourth generation computers	Artificial Intelligence

f. What is networking? Give its two advantages.

Ans. Networking is the process of linking two or more computers for sharing data and resources like printer and to allow electronic communication. Two advantages of creating a network are:

Speed:

Sending and receiving files in a computer network saves time and is more convenient than files sent manually.

Resource sharing: Important resources like printer, fax machines, scanners can be easily shared in a network which is economically viable.

g. What are the different components of a computer network? Explain them briefly.

Ans. The different components of a computer network are:

i) **Server:** A server is a computer that manages the network resources, software and files. It is normally dedicated means it performs one task only.

ii) **Workstation:** Workstation is a computer intended for individual use and it is connected to other computers and the server.

iii) **Network Interface Card:** It is a piece of hardware present inside the system unit and it provides physical access to a medium.

iv) **Transmission channels:** Data is exchanged in a network through transmission channels which can be wired or wireless.

h. What is topology? Give examples.

Ans. The physical arrangement of computers, cables and other peripheral devices forming a network is known as topology. The basic topologies are:

i) Ring topology ii) Bus topology iii) Star topology

2) Give one word answer.

- | | |
|--|--------------|
| a. Is microphone input device or output device? | Input device |
| b. Which has more storage capacity – a CD or a DVD? | DVD |
| c. The physical components of a computer which you can touch and feel. | Hardware |
| d. Which one is portable, a hard disk or floppy disk? | Floppy disk |

Activity / Test sheet based on Unit 1**1) Select the appropriate option.**

- a. The first calculating device was abacus. (Abacus, slide rule, census calculator)
- b. Vacuum tubes were used in first generation computers. (fourth, second, first)
- c. Fifth generation computers are based on artificial intelligence.(fourth, fifth, second)
- d. Joystick is an input device used for playing games. (input, output, storage)
- e. OMR is used to read MCQ. (MCQ, cheques, signals)

2) Answer the following:**a. Define Artificial Intelligence.**

[2]

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

b. Which input device is commonly used as an alternate to mouse? Describe it. [1+2]

Ans. Joystick is used as an alternate to mouse and it is an inverted or an upside down mouse with the ball visible from top. The ball is rotated to move the cursor on screen.

c. Define bar code. Where are they commonly used?

[2]

Ans. Bar code is a coding technique that uses vertical lines of same height but varying width having gaps in between. These bar codes are found on many items like books.

d. Define MIDI.

[1]

Ans. Musical Instrument Digital Interface (MIDI) is a system designed to transmit information between electronic musical instrument and the computer.

e. Define output devices. Name a few output devices.

[1+2]

Ans. An output device is a peripheral that produces the result after processing has taken place. A few examples are monitor, printer, speaker, projector and plotter.

f. Define plotter. Name its two types.

[1+2]

Ans. Plotter is an output device needed to print high quality and large sized graphs, tables and pictures on a large sized paper. The two types of plotter are:

- i) Flatbed plotter
- ii) Drum plotter

Teaching Objectives:

The objectives of this unit are to:

- Explain the features of Control Panel
- Explain the working of Network places and its importance in networking
- Explain the features of Windows XP

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the features of Control Panel
- Explain the working of Network places and its importance in networking
- List the features of Windows XP

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 will you use to wake up early in the morning for coming to school?
- How can you change the setting of your alarm clock?
- What will you use to change the date on a manual calendar?

- Reading and explanation (15 minutes)

Discuss section 2.1 (Display, Keyboard, Mouse) in which the computer's display will be changed. The students will be shown how to set the wallpaper and screen saver. The appearance of the windows will be changed as well. Keyboard and mouse settings will be shown as well.

- Classroom activity (15 minutes)

Practise Display, Keyboard and Mouse options

- Homework assignment (5 minutes)

Do Q.1 (a, c) pg. 24

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss section 2.1 (Date and Time, Add or Remove Programs).

- Classroom activity (15 minutes)

Practise Date and Time, Add or Remove Programs. Also revise previous tasks so that students learn it well.

- Homework assignment (5 minutes)

Attempt Q.1 (d) and Q.2 pg. 24 (Summative Assessment)

Period 3:

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

Discuss sections 2.1 (Printers) and 2.2 (My Network Places).

- Classroom activity (15 minutes)

Practice Printers and My Network Places.

- Homework assignment (5 minutes)

Attempt Q.1 (b), Q.2 pg. 24 (Formative Assessment)

Period 4:

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

Discuss 2.3 in detail.

- Classroom activity (5 minutes)

Attempt Q. 1pg. 23

- Homework assignment (5 minutes)

Attempt Q.1(e) pg. 24

Answers to unit 2 questions
Formative Assessment (on page 23-24)

1) Write True or False:

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

2) Fill in the blanks:

- a. Control Panel
- b. Control Panel
- c. Add or Remove Programs
- d. interface
- e. Log In

Summative Assessment (on page 24)

1) Answer the following questions:**a. Which important options are present in the Control Panel?**

Ans. The important options in Control Panel are:

Add or Remove Programs, Add Hardware, Date and Time, Display, Keyboard, Mouse, Printers and Faxes, etc.

b. How do you add a new printer?

Ans. Click on Add a Printer icon in window → Select Local(physically connected to computer/ Network printer(printer shared in the network) → Select name of printer.

c. Discuss some of the display-related settings that can be modified from Display icon in Control Panel.

Ans. **Desktop** tab allows changing the background of Windows desktop. It can have a picture and a pattern called wallpaper.

Screen Saver allows configuring screen saver to be activated in case keyboard or mouse is not used for a specified time.

Appearance tab changes the appearance of desktop, program window, documents window and dialogue box.

Settings tab provides options of viewing and changing display settings like colour quality and screen area.

d. Write the steps to remove a Windows-based program like Paint, WordPad using Control Panel.

Ans. To remove a Windows-based built-in program like Paint, WordPad follow the following instructions:

Click Add or Remove Programs → Click Add/Remove Windows Components → Choose any program (like Paint / WordPad etc.) → Click Remove button

e. List some important features of Windows XP.

Ans. Some of the important features of Windows XP are:

- The booting time of a Windows XP computer is lesser and program execution is faster than the earlier versions.
- Better quality graphics is available.
- Better management of display on task bar.
- More built-in computer management tools like Event Viewer are available.
- Recently and frequently accessed programs are shown in Start menu at top.
- Greater stability of the operating system and the installed programs is available.

2) Write short notes on the following:**a. Display:**

Double clicking Display icon displays a window called Display Properties having the following most commonly used options:

Desktop tab allows changing the background of Windows desktop. It can have a picture and a pattern called wallpaper.

Screen Saver allows configuring screen saver to be activated in case keyboard or mouse is not used for a specified time.

Appearance tab changes the appearance of desktop, program window, documents window and dialogue box.

Settings tab provides options of viewing and changing display settings like colour quality and screen area.

b. Add or Remove Programs:

Add or Remove Programs option is present in Control Panel and is meant to install or uninstall programs that are not needed or not working properly.

To add a new program select the location of setup files and the program will be installed. To remove select any program, select the program and click on Remove button.

To remove a Windows-based built-in program like Paint follow the following instructions:

Click Add or Remove Programs → Click Add/Remove Windows Components → Choose Paint → Click Remove button

Activity / Test sheet based on Unit 2

1) Ask the students to apply the keyboard settings in lab.

2) The students should also learn how to add or remove programs.

3) The students should install printers.

4) Answer the following:

a. Define operating system. List its two basic features. [1+2]

Ans. The operating system allows us to use the computer. Its basic features are:

- It works as an interface between the user and the computer.
- It creates a link between the hardware and software.
- It starts a program, opens a file / folder, saves our work, etc.

b. What is the function of Control Panel? [2]

Ans. Control Panel has icons to control, install or uninstall the hardware and software. It also allows modifying the settings.

c. What is the effect of increasing double click speed of a mouse? [1]

Ans. The effect of increasing the double click speed of a mouse is that the user has to press the mouse button faster to perform the task.

d. Ali is a left hander and wants to use mouse easily. What should he do? [2]

Ans. Select Mouse icon from Control Panel → Click Buttons → Select Switch primary and secondary buttons.

e. Name two methods to change Date and Time settings.

[2]

Ans. i. Select Date and Time from Control Panel

ii. Double click Clock icon in taskbar

f. Differentiate between local and network printer.

[2]

Ans. A local printer is one that is physically connected to the computer while network printer is one that is connected to some other computer in the network and can be shared over the entire network.

Teaching Objectives:

The objectives of this unit are to:

- Explain how to insert Header and Footer, Page Breaks, Hyperlinks and Page Setup.
- Explain the process of working with tables.
- Explain the importance of AutoCorrect and AutoText entries.
- Explain how to insert Symbols, Special Characters and Watermarks.

Learning Outcomes:

After completing the unit, students will be able to:

- Explain the features of Control Panel
- Explain the working of Network places and its importance in networking
- List the features of Windows XP

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 get page numbers at the top or bottom of each page of a book?
- If we want to give someone a document having many pages, what should we do so that pages remain in sequence and do not get mixed up?

- Reading and explanation (15 minutes)

Discuss sections 3.1, 3.2, 3.3 and 3.4 in which the students will learn how to insert header and footer, page numbers, page breaks and hyperlink.

- Classroom activity (15 minutes)

Practice inserting header and footer, page numbers, page breaks and hyperlink.

- Homework assignment (5 minutes)

Attempt Q.1(a, b) pg. 42

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss sections 3.5, 3.6, 3.7 and 3.8.

- Classroom activity (15 minutes)

Practice Page Setup options, creating table and entering data in the table.

- Homework assignment (5 minutes)

Attempt Q.1 pg. 41 and Q.1 (c) pg. 42

Period 3:

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

Discuss sections 3.9, 3.10 and 3.11.

- Classroom activity (15 minutes)

Practice formatting and modifying table. They can also practice the options learnt earlier.

- Homework assignment (5 minutes)

Attempt Q.3 pg. 42

Period 4:

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

Discuss 3.12, 3.13, 3.14 and 3.15 in detail.

- Classroom activity (15 minutes)

Practice AutoCorrect, AutoText, inserting Symbols and Special Characters and Watermark.

- Homework assignment (5 minutes)

Attempt Q.2 pg. 41 and Q.1 (d, e) pg. 42

Answers to unit 3 questions
Formative Assessment (on page 41)

1) Write True or False:

- | | |
|-----------------|------|
| a. F (not logo) | d. T |
| b. F | e. T |
| c. F | f. F |

2) Fill in the blanks:

- a. footer
- b. View
- c. Insert
- d. Delete
- e. Tab
- f. Formatting
- g. AutoText
- h. Print Layout

3) Match the following:

- | | |
|---|-----------------------|
| a. (iii) Numbering | d. (ii) Print Preview |
| b. (v) Switch between Header and Footer | e. (iv) Print |
| c. (i) Columns | |

Summative Assessment (on page 42)**1) Answer the following questions:**

- a. Can you insert a hyperlink in a Word document? If yes, then write the steps to do so.

Ans. Yes, a hyperlink can be inserted in a Word document by following these steps:

- Place the cursor where hyperlink is to be inserted.
- Click Insert menu Select hyperlink
- Type the text or web address to be displayed in the text box that appears.
- In Address, type the filename or web address that will be opened when hyperlink is clicked.
- Click OK.

b. What are headers and footers? Write the steps of inserting them in a document.

Ans. Header and Footer are areas at the top and bottom of each page of a Word document. Whatever text is written in header, it appears at the top on all pages and whatever text is written in footer, it appears at the bottom on all pages.

Steps needed to insert header or footer in a Word document are:

Click View menu → Select Header and Footer option

Type the desired text / select any option from Insert AutoText in the header area.

Click Switch between Header and Footer.

Type the desired text / select any option from Insert AutoText in the footer area.

Click Close.

c. How do you use Page Setup option in your document?

Ans. Page Setup is an option in File menu that is used to change the layout of page. This option is used to change Margins (Top / Left / Right / Bottom), Page Orientation (Portrait / Landscape), Paper Size (A4 / Legal etc.)

d. What is AutoCorrect and AutoText?

Ans. MS Word can automatically correct a few types of errors like typing two initial capital letters, capitalizing the first letter of a sentence etc. as the user types the text. This is called AutoCorrect. AutoText is a method to insert the same thing repeatedly by pressing a fewer keys.

e. What is a watermark? What is the difference between a background and a watermark?

Ans. A watermark is a picture or text that appears behind the text in a document while a background is a coloured area that appears in the entire document instead of the default white colour.

Activity / Test sheet based on Unit 3

- 1) Ask the students to type at least two pages and insert header and footer in their document. They should insert page numbers in header and their name in footer and save it with their name.
- 2) The students can insert a hyperlink by following the steps mentioned on pgs.27 and 28.
- 3) The students should be asked to insert a table where they will enter the names and marks obtained by five students. Format text to make it presentable.
- 4) The students should be asked to insert AutoText entry as explained on pg. 37.
- 5) Create a file to practice inserting symbols, special characters and watermark.

Teaching Objectives:

The objectives of this unit are to:

- Explain the methods of creating a presentation
- Demonstrate the use of bullets and numbering, animating objects, inserting sound, changing colour scheme
- Demonstrate the use of Power-point views
- Explain the purpose of creating a custom slide show

Learning Outcomes:

After completing the unit, students will be able to:

- Differentiate between the methods of creating a presentation
- Apply bullets and numbering, animate objects, insert sound, change colour scheme
- Use available views as per the need
- Create a Custom slide show

Number of allocated periods:4**Period 1:**Sample lesson plan for a 40 minute period- Starter activity (5 minutes)

Ask students the following questions:

- How will you prepare a presentation without using a computer? What are the advantages and disadvantages of manual and computerised presentation?
- Which application software helps in creating a presentation?
- What is a slide?

- Reading and explanation (15 minutes)

Discuss sections 4.1 and 4.2 in which various methods of creating a presentation will be explained. Teachers may explain it directly in the lab and ask students to prepare presentation. They can also apply bullets and numbering.

- Classroom activity (15 minutes)

Prepare a presentation using all the three methods.

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) pgs. 59-60 (Summative Assessment)

Period 2:- Starter activity (5 minutes)- Reading and explanation (15 minutes)

Discuss 4.3, 4.4 and 4.5 in which the available views, colour scheme and animating objects are explained.

- Classroom activity (15 minutes)

Practise using available views, changing colour scheme and animating objects.

- Homework assignment (5 minutes)

Attempt Q.1 pg. 59 and Q.1 (c) pg. 60

Period 3:**- Starter activity (5 minutes)****- Reading and explanation (15 minutes)**

Discuss sections 4.6, 4.7 and 4.8 in which the method to insert sound, applying transition are explained.

- Classroom activity (15 minutes)

Practise inserting sound and applying transition.

- Homework assignment (5 minutes)

Attempt Q.1 (d) and Q.2 pg. 60

Period 4:**- Starter activity (5 minutes)****- Reading and explanation (15 minutes)**

Discuss sections 4.9, 4.10 and 4.11 in which Custom slide show; inserting header and footer; page setup are explained.

- Classroom activity (15 minutes)

Practice creating Custom slide show; inserting header and footer; page setup

- Homework assignment (5 minutes)

Attempt Q.2 pg. 59 and Q.1 (e, f) pg. 60.

**Answers to unit 4 questions
Formative Assessment (on page 59)****1) Write True or False:**

- a. F c. F
b. F d. T

2) Fill in the blanks:

- a. Blank Presentation
b. Normal
c. Slide Sorter
d. automatically
e. Animating
f. Portrait

Summative Assessment (on pages 59-60)**1) Answer the following questions:**

a. What are the three methods for creating a PowerPoint presentation?

Ans. The three methods for creating a PowerPoint presentation are:

- i) Blank presentation: This option is used to create a presentation completely and is the default option.
- ii) Design template: These are predefined files that contain styles in presentation.
- iii) AutoContent Wizard: This presentation type prompts you to answer some questions and based on the choices, creates a presentation format for you.

b. What do you understand by slide layouts? Name any three slide layouts.

Ans. Slide layouts contain formatting, positioning, and placeholders for all of the content that appears on a slide. Any three slide layouts are:

- i) Title slide
- ii) Title and content
- iii) Section Header

Note: Students can write any other layout as present in MS PowerPoint.

c. How is the Slide Sorter View useful?

Ans. In Slide Sorter View, the user can see miniature version of all slides in presentation. The user can easily add, move and delete slides.

d. What do you understand by transition? Why is it used?

Ans. Transition means the movement of slide objects to make the presentation impressive.

e. Explain Custom slide show when is it used?

Ans. A custom slide has a presentation within a presentation. It has some slides which are common and a few others that are prepared for different people with different needs. e.g. there can be an educational presentation that is prepared for students of Computer Studies and Science. After showing the common slides, the students of the two subjects will be shown different slides.

f. Which settings are available in Page Setup option in PowerPoint?

Ans. Page Setup is used to change the slide size and orientation for printing. With slide size, the paper size can be selected. Orientation settings help in setting the orientation as Portrait or Landscape. Notes, handouts & outline is also available through which orientation for these can be set as well.

2) Write short notes on:**a. Blank presentation:**

This option is used to create a presentation completely and is the default option. User can choose options as per his choice and make it look attractive.

b. Design Templates:

Design templates are predefined files that contain styles in a presentation.

This includes the type and size of bullets and fonts; placeholder sizes and positions; background design and fill colour schemes; and a slide master and optional title master.

Activity / Test sheet based on Unit 4

1) Ask the student to prepare a slide show from any chapter of their Computer text book.

They should apply design template and apply transition to make the presentation attractive.

2) The students can also prepare a presentation on a topic from any other subject like science, geography, history, etc.

3) Answer the following questions:

a. What is slide master?

[2]

Ans. Slide master is the slide that stores information about the design template applied, including font styles, placeholder sizes and positions, background design and colour schemes.

b. What is the difference between Apply to All slides and Apply to Selected Slides?

[2]

Ans. To apply design template to all slides in the presentation, use Apply to All slides while Apply to Selected Slides option applies the chosen template to slides that are selected only.

c. Can a user apply any type of bullet or number from toolbar icon? [1]

Ans. The toolbar icon allows user to insert only one type of bullet or number.

d. Name all views available in PowerPoint.

[5]

Ans. The available views are Normal view, Outline view, Slide view, Slide Sorter view and Slide Show view.

e. Define animation.

[1]

Ans. Animation means to add a special visual or sound effect to text or object.

Teaching Objectives:

The objectives of this unit are to:

- Explain the different types of cell references
- Explain the term sorting and how to sort data in a sheet
- Explain how to search desired data using Filter options
- Explain how to present data in the form of chart
- Explain the process applied to import data from any other software to Excel sheet

Learning Outcomes:

After completing the unit, students will be able to:

- Differentiate the types of cell references
- Explain the term sorting and to sort data in a sheet
- Search desired data using Filter options
- Create chart to present data
- Import data from any other software to Excel sheet

Number of allocated periods:4**Period 1:**Sample lesson plan for a 40 minute period- Starter activity (5 minutes)

Ask students the following questions:

- Which software should we use to present accounting data in an organized way?
- What is the main difference between doing it manually and using a computer?
- What are the features of the software you have learnt in the previous class?

- Reading and explanation (15 minutes)

Discuss section 5.1 in which the students will be explained the terms row, column, cell, formula, different ways of writing formula and the types of cell reference.

- Classroom activity (15 minutes)

Create a mark sheet and apply formulae to calculate obtained marks and percentage. They can also copy and paste the formula to see the result of the three types of references.

- Homework assignment (5 minutes)

Attempt Q.1(c, d) pg. 75

Period 2:- Starter activity (5 minutes)- Reading and explanation (15 minutes)

Discuss section 5.2 in which the students will be explained sorting and its ways.

- Classroom activity (15 minutes)

Students will practice sorting by applying the techniques on a sheet created earlier. They may also format the sheet by using border, colour, font, etc.

- Homework assignment (5 minutes)

Attempt Q.1 (b) pg. 75

Period 3:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss section 5.3 in which the students will learn how to search desired data using Filter options.

- Classroom activity (15 minutes)

Apply filter options on the saved file.

- Homework assignment (5 minutes)

Attempt Q.1pg. 73 and Q.3pg. 74

Period 4:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss sections 5.4 and 5.5 in which the students will learn how to create charts using chart wizard and importing data.

Classroom activity (15 minutes)

Create a chart and import data from another file to the Excel sheet.

- Homework assignment (5 minutes)

Attempt Q.1 (a, e), Q.2 pg. 75 and Q.2 pg.74

Answers to unit 5 questions
Formative Assessment (on page 73-74)

1) Write True or False:

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

2) Fill in the blanks:

- a. sorting
b. cell reference
c. Importing
d. Filtering
e. chart

3) Match the following.

- a. Sorting (2) Arranging data

- b. Relative Reference (4) The cell address changes when copied
- c. Absolute Reference (5) The cell address does not change when copied
- d. Bar chart (3) Can be created with Chart Wizard
- e. Filter switches (1) Present in AutoFilter

Summative Assessment (on page 75)**1) Answer the following questions:****a. What are charts? Give one advantage of using charts.**

Ans. A chart is a graphical representation of information. It is inserted along with data to make it easier for people to understand.

b. What is sorting? In how many ways can data be sorted?

Ans. Arranging data in ascending or descending order is called sorting. Sorting can be done in two ways.

- (1) Sorting on one column
- (2) Sorting on more than one column

c. What is a cell reference?

Ans. A cell reference identifies the location of a cell or a group of cells in the spreadsheet. It is also known as cell address. It is composed of the column letter and row number that intersect to form a cell, e.g. A1.

d. Explain all three types of cell references with example.

Ans. The three types of cell references are:

(1) Relative reference:

In relative cell reference, when the formula or function is copied and pasted to another location, the cell reference in the pasted cells changes automatically. This is the default reference.

(2) Absolute Reference:

In absolute cell reference, when the formula or function is copied and pasted to another location, the cell reference in the pasted cells remains constant. Absolute cell reference in a formula always refers to a cell in a specific location.

(3) Mixed Reference:

A mixed reference has an absolute column and a relative row, or absolute row and a relative column. If the position of the cell that contains the formula changes, the relative reference changes but absolute reference remains constant.

e. Write the steps for importing data in Excel.

Ans. The following steps are used to import data in Excel.

- 1) Click Data menu → Import External Data → Import Data

- 2) Select the folder and file (Word, Excel, database) in Data Source dialogue box.
- 3) Select table to be inserted and click OK
- 4) Select destination (same sheet / a new sheet) and click OK

Activity / Test sheet based on Unit 5

- 1) **Ask students to create a worksheet. Enter mark sheet data of 10 students. Perform the following operations.**
 - i) Apply formulae to calculate obtained marks, percentage and remarks.
 - ii) Sort data in descending order of marks. If marks are same, use name to sort data.
 - iii) Apply filter options to display only the desired data e.g. only students who have scored more than or equal to 50%.
 - iv) Students are advised to apply formatting (borders, fonts, colour, etc.) to improve the presentation of work.
- 2) **Answer the following questions:**
 - a. **What is a cell?** [1]
Ans. The intersection of a row and a column is called a cell.
 - b. **How many rows and columns are present in Excel?** [2]
Ans. There are 256 columns (A,B, ... Z, AA, AB, ... AZ, BA, .. BZ, CA ... CZ, DA ... DZ, EA ... EZ, FA... FZ, GA .. GZ, HA .. HZ, IA to IV). Rows are numbered from 1 to 655356.
 - c. **Which symbols are used at the beginning of a formula?** [2]
Ans. Excel allows = and + to be used at the beginning of a formula.
 - d. **When can we sort on more than one column?** [1]
Ans. When the first column contains duplicate values, then there is a need to use another column for sorting.
 - e. **Which menu contains Filter options?** [1]
Ans. Filter option is present in Data menu.
 - f. **Name any three types of charts.** [3]
Ans. Column chart, Bar chart, Line chart

Note: Students may name any other chart type as well.

Teaching Objectives:

The objectives of this unit are to:

- Explain the levels of computer languages and their advantages and disadvantages.
- Explain the purpose of translators.
- Explain the purpose of various computer languages.

Learning Outcomes:

After completing the unit, students will be able to:

- Define the levels of computer languages and list their advantages and disadvantages.
- Explain the purpose of translators.
- List and explain the purpose of various computer languages.

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 communicate with anyone, what do they do?
- What should they do if they want to communicate with someone whose language they do not understand?

- Reading and explanation (25 minutes)

Discuss section 6.1 in which the students will be explained the terms computer program, programming, low level language and machine language in detail.

- Classroom activity (5 minutes)

Attempt Q.1 pg. 79

- Homework assignment (5 minutes)

Attempt Q.1(a, b) pg. 80

Period 2:- Starter activity (5 minutes)- Reading and explanation (25 minutes)

Discuss section 6.1 in which the students will be explained high level language and their examples.

- Classroom activity (5 minutes)

Attempt Q.2 pg. 79.

- Homework assignment (5 minutes)

Attempt Q.1 (c, d) pg. 80

Period 3:

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

Discuss section 6.2 in which students will learn the purpose of translators.

- Classroom activity (5 minutes)

Attempt Q.3 pg. 80.

- Homework assignment (5 minutes)

Attempt Q.1 (e) pg. 80

Period 4:

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

Revise the previous topics if students face any problem.

- Classroom activity (15 minutes)

Attempt Q.2 (a)pg. 80. Teacher may ask any of the questions mentioned in activities.

- Homework assignment (5 minutes)

Attempt Q.2 (b, c) pg. 80.

Answers to unit 6 questions
Formative Assessment (on page 79)

1) Fill in the blanks:

- a. programming language
- b. computer programmer
- c. machine oriented
- d. binary digits

2) Write True or False:

- a. T c. T
- b. F d. T

3) Write full forms of the following:

- a. BASIC Beginner's All-purpose Symbolic Instruction Code
- b. LOGO Language Of Graphic Orientation
- c. FORTRAN FORmulaTRANslator
- d. COBOL Common Business Oriented Language

Summative Assessment (on page 80)

1) Answer the following questions:

- a. What is a program?

Ans. A program is a well-defined set of instructions, when executed, makes the computer work in a particular manner.

b. What do you understand by the term ‘programming’?

Ans. Programming is a process of designing, writing, testing, debugging and documenting a program.

c. What is a low level language?

Ans. A low level language is a language easily understood by the computer. It is machine dependent.

d. What is a high level language? Write some of its advantages.

Ans. A high level language is easily understood by the humans. Its advantages are:

- 1) Programs written in high level language are easier to understand.
- 2) It is easier to find and remove errors in a high level language program.
- 3) Programs written for one machine can run on other machines easily.

e. What are compiler and interpreter?

Ans. Compiler translates the whole program written in high level language in a single operation. A translator translates a program in a step-by-step process and is slower than a complier.

2) Write short notes on:

a. BASIC:

BASIC stands for Beginner’s All-purpose Symbolic Instruction Code. It is a very simple computer programming language.

b. LOGO:

LOGO stands for Language Of Graphic Orientation. It is used to draw figures and do sums.

c. JAVA:

Java is a modern programming language developed by Sun Microsystems. It uses the concept of object oriented programming.

Activity / Test sheet based on Unit 6

1) Answer the following questions:

a. Why is a programming language needed?

[1]

Ans. A programming language is needed to communicate with the computer.

b. What is machine language?

[1]

Ans. Machine language is the language based on binary digits 0s and 1s. It is easily understood by the computer.

c. Which language is easiest for computer and why? [2]

Ans. Machine language is easiest for computer as it is based on 0s and 1s.

d. What is Mnemonics? [1]

Ans. Certain symbols and letters are used in machine language and these are called mnemonics.

e. What is assembly code? Which translator is needed in assembly language? [2]

Ans. Programs written in assembly language are called assembly codes. Assembler is needed to translate assembly language program to machine code.

f. Define C++. Which is its enhanced version? [2+1]

Ans. C++ is sometimes called enhancement of C language. It is an object oriented language used to develop different applications. Its enhanced version is Visual C++ or VC++.

Teaching Objectives:

The objectives of this unit are to:

- Explain the terms variable and constant and their types
- Explain the rules of declaring the variables
- Explain the purpose of different statements used in QBASIC
- Explain how to design a program using QBASIC statements

Learning Outcomes:

After completing the unit, students will be able to:

- Define the terms variable and constant and their types
- List the rules of declaring the variables
- Write the purpose of different statements used in QBASIC
- Design a program using QBASIC statements

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 store a value temporarily what do you need?
- Which word do we use for a non - changing value?
- What is the difference between command and statement?
- Recall statements learnt in the previous class

- Reading and explanation (25 minutes)

Discuss sections 7.1, 7.2 and 7.3 in which the students will be explained the terms variable and constant and their types. They will also learn the rules of defining variables in QBASIC.

- Classroom activity (5 minutes)

Attempt Q.1 pg. 88

- Homework assignment (5 minutes)

Attempt Q.2(a, b) pg. 88

Period 2:- Starter activity (5 minutes)- Reading and explanation (15 minutes)

Discuss section 7.4 in which the students will be explained the syntax and purpose of CLS, LET and PRINT statements. They will also design programs.

- Classroom activity (15 minutes)

Attempt Q.1pg. 89

- Homework assignment (5 minutes)

Attempt Q.2(c)pg.88

Period 3:

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

Discuss section 7.4 in which the students will be explained the syntax and purpose of INPUT statement. They will also design programs.

- Classroom activity (20 minutes)

Practice examples 1-4 given on pg. 87

- Homework assignment (5 minutes)

Practise all programs learnt. Teacher may also give them questions mentioned in activity area.

Period 4:

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

Discuss section 7.5 in detail.

- Classroom activity (20 minutes)

Attempt Q.2 pg. 89

- Homework assignment (5 minutes)

Attempt Q.2 (d) pg. 88

**Answers to unit 7 questions
Formative Assessment (on page 88)**

1) Fill in the blanks:

- a. LET
- b. string variable
- c. PRINT
- d. remarks / REM statements
- e. String constant

2) Answer the following questions.**a. Define variable.**

Ans. Variable is a place in memory that holds value that may change during the execution of the program.

b. List the rules for naming variables.

Ans. Some basic rules to write variable name are:

- Variable name must always begin with a letter.
- After the first letter, you may use letter or number.
- A variable should not be a reserved word like LET, PRINT.
- A variable can be a maximum of 40 characters.
- A variable should end with an appropriate sign.

c. What is the function of following commands?

- Ans.** i. CLS: CLS is used to clear the screen.
ii. REM: REM statement is used to give remarks in the program.
iii. INPUT: INPUT statement is used when the program needs values to be entered by the user.
iv. PRINT: PRINT statement is used to display result on the screen.

d. List the arithmetic operators used in QBASIC.

- Ans.** The following arithmetic operators are used in QBASIC.
i. + (Addition) iii. * (Multiplication) v. ^ (Exponential)
ii. - (Subtraction) iv. / (Division)

Summative Assessment (on pages 89)**1) Write output of the following programs:**

- | | |
|--|--|
| a. CLS
A% = 120
B% = 10
C % = A% / B%
PRINT "THE RESULT IS", C%
PRINT "THE RESULT IS"; C% | b. CLS
C% = 10
D% = 14
T % = C% + D%
F % = T% / 6
PRINT T%
PRINT
PRINT F% |
|--|--|

Ans. THE RESULT IS 12

Ans. 24

- | | |
|---|---|
| c. CLS
PRINT "HI! MY NAME IS AHMED";
PRINT "I STUDY IN CLASS VII" | d. CLS
A% = 10
B% = 4
R% = A% MOD B%
PRINT "THE REMAINDER IS", R% |
|---|---|

Ans. HI! MY NAME IS AHMED I STUDY IN CLASS VII **Ans.** THE REMAINDER IS 2

2) Write the following programs and execute them. If they run properly without errors, write them on a chart and paste on the wall of your room.**a. Program to print the product of three numbers.**

- Ans.** CLS
A% = 3
B% = 4
C % = 5
R% = A% * B% * C%
PRINT R%

b. Program to print home address.**Ans.** CLS

```
PRINT "MY ADDRESS IS ";
PRINT "Flat No. 105, Saima Apartments, DHA"
```

c. Program to find the circumference of a circle. (Take help of your teacher /elder)**Ans.** CLS

```
INPUT "Enter radius of the circle", R%
P! = 3.142
C% = 2 * P! * R%
PRINT "Circumference of circle "; C%
```

d. Program to find the area of a rectangle.**Ans.** CLS

```
INPUT "Enter length of the rectangle", L%
INPUT "Enter breadth of the rectangle", B%
A% = L% * B%
PRINT "Area of rectangle"; A%
```

Activity / Test sheet based on Unit 7**1) Answer the following questions:****a. What are the two types of variables?**

[2]

Ans. The two types of variables are

- i. String variable. ii. Numeric variable

b. What are the types of numeric variable?

[4]

Ans. The types of numeric variables are:

- i. Integer ii. Long Integer iii. Single Precision iv. Double Precision

c. Define numeric and string variable with examples.

[4]

Ans. The memory location that stores numbers is called numeric variable like A = 10
The memory location that stores letters or words is called string variable like
NM\$ = "ASAD"**d. Which variable is needed to store decimal value?**

[2]

Ans. Single precision variable stores decimal values. It should end with! e.g. P! =
3.142**2) Write the following programs and execute them.**

a. Program to print the name of your best friend.

Ans. CLS

PRINT "MY BEST FRIEND IS ALI"

b. Program to find the area and perimeter of a square.

Ans. CLS

INPUT "Enter length of square", L%

A% = L% ^ 2

P% = 4 * L%

PRINT "Area of square"; A%

PRINT

PRINT "Perimeter of square"; P%

Teaching Objectives:

The objectives of this unit are to:

- Explain the terms and purpose of algorithm and flow chart
- Explain the rules to be followed while writing algorithm
- Explain the purpose of various symbols used in designing a flow chart
- Design a flow chart

Learning Outcomes:

After completing the unit, students will be able to:

- Define the terms and purpose of algorithm and flow chart
- List the rules to be followed while writing algorithm
- Explain the purpose of various symbols used in designing a flow chart
- Design flow chart

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 go for a picnic what do they do?
- What is included in the list of desired items?
- Is it possible to go for a picnic without a proper planning? Give reasons.

- Reading and explanation (20 minutes)

Discuss section 8.1 in which the students will be explained definition of algorithm, its advantages and the rules of writing.

- Classroom activity (10 minutes)

Explain examples on pg. 91

- Homework assignment (5 minutes)

Attempt Q.1 (a, b, c) pg. 99

Period 2:- Starter activity (5 minutes)- Reading and explanation (10 minutes)

Discuss algorithm on pg. 92.

- Classroom activity (20 minutes)

- Attempt Q.1, 3 pg. 98
- Write an algorithm to make a cup of tea

- Homework assignment (5 minutes)

Write an algorithm to take input of marks of three subjects. Find obtained marks and percentage.

Period 3:

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

Discuss section 8.2 in which students will learn the symbols used in designing a flow chart and their purpose.

- Classroom activity (5 minutes)

Attempt Q.2 pg. 98

- Homework assignment (5 minutes)

Attempt Q.2 pg. 99

Period 4:

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

- Starter activity (5 minutes)

- Reading and explanation (10 minutes)

Discuss section 8.3 in which they will learn the purpose of loop and counter.

- Classroom activity (20 minutes)

Ask students to draw flow chart of activities given on pg. 96.

- Homework assignment (5 minutes)

Attempt Q.1 (d, e, f, g) pg. 99

**Answers to unit 8 questions
Formative Assessment (on page 98)**

1) Fill in the blanks:

- a. steps
- b. problem
- c. important / helpful
- d. English / human
- e. Start

2) Match the following.

- a. A flowchart - is a graphical representation of steps for solving a problem
- b. An oval - to represent start / stop
- c. a parallelogram - is used for input and output steps
- d. A diamond - is used for decision making
- e. A circle - is used to connect two different parts of a flowchart

3) Arrange the steps of algorithm to add two numbers A and B.

Step 1. Start

Step 2. Read A, B

Step 3. Sum = A + B

Step 4. Print Sum

Step 5. Stop

Summative Assessment (on page 99)

1) Answer the following questions:

a. What is an algorithm?

Ans. Algorithm is the step by step process of solving any problem.

b. Write any three advantages of algorithm.

Ans. Advantages of algorithm are:

- 1) They are easy to understand.
- 2) They are easy to implement.
- 3) They are easy to modify.

c. Write rules to write an algorithm.

Ans. Rules to write algorithm are:

- Give numbers to statement.
- Always begin with a Start.
- Write the statements clearly.
- Write Stop at the end of the algorithm.
- Write each statement in a separate line.

d. Define the following.

- Ans.** i) **Flowchart :** A flowchart is a graphical representation of steps for solving a problem
ii) **Loop:** Repeating the same process more than once is called loop.
iii) **Counter:** A counter is used to count the number of times a process is repeated.

e. Write and explain any three flowchart symbols.

- Ans.** 1) **Start / Stop :** An oval shaped symbol is used to represent the beginning and end of flowchart.
2) **Processing:** A rectangle is used to represent processes. Whenever any calculation or assignment is to be shown, processing symbol is used.
3) **Decision :** A diamond shaped symbol is used to select from a list of choices.

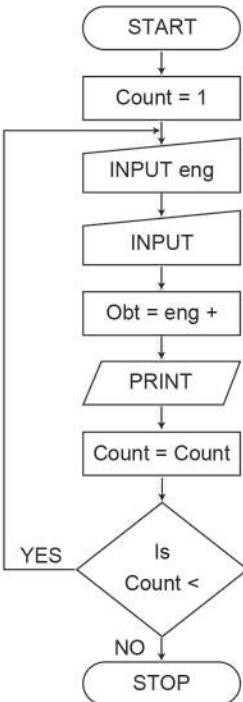
f. What are loops?

Ans. Repeating the same process more than once is called loop.

g. What is a counter?

Ans. A counter is used to count the number of times a process is repeated.

- 2) Draw a flowchart to find the sum of the marks of English and Computer for a class of 30 students.



Activity / Test sheet based on Unit 8

- 1) Ask the students to design a flow chart and write algorithm for the following tasks:

- Prepare breakfast
- Take input of marks obtained in computer studies by 30 students. Find and output average marks.
- Take input of the height and weight of a student. Calculate his body mass index using the following formula.

$$\text{BMI} = \frac{\text{weight}}{(\text{height} * \text{height})}$$

- Take input of the height and weight of 30 students. Calculate their body mass index and display the result.

$$\text{BMI} = \frac{\text{weight}}{(\text{height} * \text{height})}$$

Teaching Objectives:

The objectives of this unit are to:

- Explain the features of HTML
- Explain how to write, save and open a webpage
- Explain the purpose of different HTML tags

Learning Outcomes:

After completing the unit, students will be able to:

- List the features of HTML
- Write, save and open a webpage
- Define the purpose of different HTML tags

Number of allocated periods: 4

Period 1:

Sample lesson plan for a 40 minute period

- Starter activity (5 minutes)

Ask students the following questions:

- To communicate over a large distance (WAN), what will they do?
- What are the advantages and disadvantages of WAN?
- Which software will they use to view the webpage?

- Reading and explanation (15 minutes)

Discuss sections 9.1, 9.2 and 9.3 in which the students will be explained how to start an editor like Notepad for creating a webpage. They will be explained to view webpage in a browser.

- Classroom activity (15 minutes)

Ask the students to create a file using Notepad and save it. They should view it using a web browser.

- Homework assignment (5 minutes)

Attempt Q.2pg. 105 (Formative Assessment) and Q.1 (a) pg. 105 (Summative Assessment)

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (10 minutes)

Discuss sections 9.4 and 9.5 in detail with the help of computer and multimedia.

- Classroom activity (20 minutes)

Explain HTML elements and ask them to write a paragraph about their hobby / their favourite personality using HTML elements. They will use tags to make the text bold, italic and underline.

- Homework assignment (5 minutes)

Attempt Q.1 pg. 104 and Q.1 (b) pg. 105

Period 3:

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

Discuss section 9.6 in detail explaining the purpose of tag attributes. Explain how to insert an image.

- Classroom activity (20 minutes)

Ask the students to open a new file and insert images by using tag.

- Homework assignment (5 minutes)

Attempt Q.1 (c), Q.2 (a, b) pg. 105 (Summative Assessment)

Period 4:

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

Discuss section 9.7 in detail.

- Classroom activity (20 minutes)

Attempt Q.3 pg. 105. Also revise all the tags learnt earlier.

- Homework assignment (5 minutes)

Attempt Q.1 (d), Q.2 (c, d) pg. 105 (Summative Assessment)

**Answers to unit 9questions
Formative Assessment (on pages 104-105)**

1) Fill in the blanks:

- a. Hyper Text Markup Language
- b. .htm/ .html
- c. text
- d. container
- e. <HTML>

2) Write full forms of the following:

- a. HTML Hyper Text Markup Language
- b. WYSIWYG What You See Is What You Get

Summative Assessment (on page 105)

1) Answer the following questions:

- a. **What is the purpose of HTML?**

Ans. It is a simple and easy to learn language that is needed to develop webpages.

b. What are HTML elements?

Ans. The content typed along with the start tag and the end tag is called HTML element e.g. ... , <BODY> ... </BODY>

c. Define attributes of a tag by giving an example.

Ans. Attributes of a tag provide additional information about HTML elements. They are always written in the opening tag. e.g.

In the above example, the attribute of is align and its value is left.

d. What are the steps of executing an HTML program using a Text editor?

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

- 1) Open Notepad and type the code. Save it by giving it some name and extension
- 2) Open a web browser e.g. Internet Explorer.
- 3) Click File menu → Select Open.
- 4) Click on Browse → locate the file → Click OK.

2) Differentiate between the following:**a. Container tag and Empty tag**

Container tag: The tag that has start and end tag like ... is called container tag.

Empty tag: The tag that only has the open or start tag and no closing tag is called empty tag e.g.

b. <HEAD> tag and <BODY> tag:

<HEAD> tag is the first tag under <HTML> tag. It contains other tags like <TITLE>. <BODY> tag comes after </HEAD> element. It is used to display text, images, links etc. on a webpage.

c. Tag and tag attributes:

HTML tags are the keywords enclosed in a pair of angular brackets. i.e. < and >. These tags are usually paired e.g. <HTML> and </HTML> to mark start and end of HTML instruction.

Tag Attributes provide additional information about HTML elements. They are always written in the opening tag.

d. WYSIWYG editor and Text editor:

WYSIWYG stands for What You See Is What You Get. This editor allows you to create webpages without the use of HTML tags.

Text editor is used to create a webpage by using HTML tags.

3) Write the tag and its attributes for the following tasks.

a. To describe the webpage as HTML document.

<HTML> ... </HTML>

b. To align the text at the top of the webpage.

<p align = "top"> -- </p>

c. To give title 'My webpage'.

<TITLE>My webpage </TITLE>

Activity / Test sheet based on Unit 9

1) Ask the students to create a webpage on ‘My favourite sport’/ ‘My family’/ ‘A school trip’.

2) Answer the following questions:

a. Differentiate between a website and a webpage.

[2]

Ans. A webpage is a single page displaying information while a collection of webpages is called a website.

b. Define the following:

i) Hyper Text ii) Markup Language

[2]

Ans. Hyper Text is a piece of text that works as a link.

Markup Language is a way of writing layout information within documents.

c. What is a web browser? Write names of a few web browsers. [2]

Ans. Web browser is application software that helps in viewing the webpages e.g. Internet Explorer, Mozilla Firefox, Google Chrome, etc.

d. What is the purpose of <TITLE> tag?

[1]

Ans. The text written inside <TITLE> and </TITLE> appears in the title bar of the webpage.

Teaching Objectives:

The objectives of this unit are to:

- Explain the purpose of Favourites
- Explain how to save and print a webpage
- Search desired information using search engine like Google
- Explain how to work with e-mail sending and receiving
- Explain how to chat with acquaintances

Learning Outcomes:

After completing the unit, students will be able to:

- Define the purpose of Favourites
- Save and print a webpage
- Search desired information using search engine like Google
- Send and receive e-mail
- Chat with acquaintances

Number of allocated periods: 4**Period 1:**Sample lesson plan for a 40 minute period- Starter activity (5 minutes)

Ask students the following questions:

- Which software should they use to open webpage?
- If you want to reach your relative's new home, what do you need?
- What is snail mail? Why is it not preferred by people now?

- Reading and explanation (20 minutes)

Discuss sections 10.1, 10.2, 10.3 and 10.4 (definition of search engine) in which the students will learn the purpose of Favourites. They will also learn how to save and print a webpage for future reference.

- Classroom activity (10 minutes)

Practice adding URLs to Favourites, saving and printing webpages.

- Homework assignment (5 minutes)

Attempt Q.1 (a) pg. 117

Period 2:- Starter activity (5 minutes)- Reading and explanation (10 minutes)

Discuss section 10.4 in which the students will learn the searching techniques applied using search engine.

- Classroom activity (20 minutes)

Allow students to search the desired information using search engine like Google.

- Homework assignment (5 minutes)

Attempt Q. 2 pg.117

Period 3:

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

Discuss section 10.5 in which the students will learn the advantages of sending and receiving email messages. They will learn the purpose of various folders of email account.

- Classroom activity (15 minutes)

Practice all the options explained in class.

- Homework assignment (5 minutes)

Attempt Q. 1(b, c, e) pg.117

Period 4:

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

Discuss section 10.6 and help students learn how to chat with online friends.

- Classroom activity (20 minutes)

i. Attempt Q.1 and 2 pgs. 116 and 117 (Formative Assessment).

ii. Students will use lab to chat with friends online.

- Homework assignment (5 minutes)

Attempt Q.1 (d) pg. 117

**Answers to unit 10 questions
Formative Assessment (on pages 116 - 117)**

1) Fill in the blanks.

- a. searching
- b. terms / words
- c. Inbox
- d. deleted
- e. webpage

2) Write True or False:

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

Summative Assessment (on pages 117)

1) Answer the following questions:

- a. How do you search for information on Internet? Give examples of some of the popular search engines.

Ans. We can search for information on the Internet using websites that help in locating words or terms typed by the users. These websites are called search engine.

Some popular search engines are www.google.com, www.yahoo.com, www.altavista.com etc.

b. What do you understand by e-mail? Explain the use of some of the e-mail folders.

Ans. Electronic mail or e-mail is a faster method of sending and receiving messages from one computer to another computer as compared to snail mail that may take days to reach its destination.

Some of the e-mail folders are:

- i) Inbox: This folder contains all the mails received from other users.
- ii) Trash: This folder stores the deleted mails temporarily.
- iii) Sent: This folder is used to save a copy of the messages that you have sent.

c. Write the advantages of using e-mail.

Ans. Advantages of email are:

- It is cost effective and faster method.
- It can reach any part of the world within few seconds or minutes.
- This service is provided free of cost.
- No one can read your messages until that person knows your password.
- Many things like letters, music, programs, images, etc. can be sent easily.

d. Explain Internet chatting and chat rooms.

Ans. Internet chatting involves people connecting to their friends and relatives for an online session of sending and receiving text and voice messages. Inviting a number of connected friends to chat together on a single subject is done in a place called chat room.

e. Write some features of e-mail programs.

Ans. E-mail programs allow you to compose a mail. This can be done when user clicks on New or Compose button. It opens a window.

- 1) Type the e-mail address of the user in box after To.
- 2) If the recipients of the e-mail are more, then their addresses can be typed in Cc separated by commas or semicolons.
- 3) Type the topic or subject of your mail in Subject.
- 4) Type the actual message in Content box.

2) Write short notes on:

a. Searching techniques:

Searching techniques involve the methods that are applied in order to find anything. Boolean operators like AND, OR, NOT, AND NOT are used to search the desired data. Using inverted commas around the search criteria, narrows down your search.

b. Search engines:

We can search for information on the Internet using websites that help in locating words or terms typed by the users. These websites are called search engines. Some popular search engines are www.google.com, www.yahoo.com, www.altavista.com etc.

Activity / Test sheet based on Unit 10

1) Ask the students to open search engine to find the web pages meeting the search criteria.

2) Answer the following questions:

a. Which browser is available with Windows operating system? [1]

Ans. Internet Explorer is available with Windows operating system.

b. Define the purpose of Favourites in a browser. [1]

Ans. The purpose of Favourites is to add some frequently visited websites to its folder so as to avoid typing the URL again and again.

c. Explain the steps to add a website to Favourites. [2]

Ans. Click Favorites Select Add to Favourites

d. What is the extension of HTML files? [1]

Ans. All webpages are saved with extension .htm or .html

Teaching Objectives:

The objectives of this unit are to:

- Explain the steps needed to start Flash
- Explain the purpose of various tools used in Flash
- Learn how to create and execute an animation

Learning Outcomes:

After completing the unit, students will be able to:

- Start Flash
- Explain the purpose of various tools used in Flash
- Create and execute an animation

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 do they understand by the term graphics? What is its advantage over text?
- What is animation?

- Reading and explanation (15 minutes)

Discuss section 11.1 in which the students will learn how to start Flash and the basic components of Flash screen.

- Classroom activity (15 minutes)

Draw and label Flash screen.

- Homework assignment (5 minutes)

Attempt Q.1 (a, b) pg. 124

Period 2:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss section 11.2 in which the students will be explained the purpose of some tools of the toolbox (e.g. oval, rectangle, selection, brush).

- Classroom activity (15 minutes)

The students will insert these tools and will work on them.

- Homework assignment (5 minutes)

Attempt Q.1, 2 pg. 123 and Q.1 (c) pg.124

Period 3:

- Starter activity (5 minutes)

- Reading and explanation (15 minutes)

Discuss section 11.2 in which the students will be explained how to create an animation.

- Classroom activity (15 minutes)

The students will practise this exercise

- Homework assignment (5 minutes)

Attempt Q.2 pg. 124

Period 4:

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

The teacher may give them some exercise to create an animation like moving a ball from one location to another.

- Classroom activity (25 minutes)

Design the animation explained earlier.

- Homework assignment (5 minutes)

Attempt Q.1 (d, e) pg. 124

Answers to unit 1 questions Formative Assessment (on page 123)

1) Fill in the blanks:

- Macromedia Flash
- Brush tool, Paint Bucket tool
- Rectangle tool
- Eraser tool
- Stage

2) Label the following:

Refer to the figure on pg. 119 for all desired tools

Summative Assessment (on pages 124)

1) Answer the following questions:

- Why do you need Macromedia Flash?

Ans. Macromedia Flash is needed to create graphics, animations, presentations, cartoon movie etc.

b. What is Timeline?

Ans. Timeline is an important window of Flash that is needed to layout the sequence of movies.

c. What are frames? Briefly explain different types of frames.

Ans. Frame is the smallest unit of Flash movie (animation) and is represented as a small rectangle on the right side of Timeline window. There are two types of frames in Flash frames and key frames. Key frames are frames in which changes in animation are defined.

d. What is a symbol? Why is it used?

Ans. A symbol is a graphic, button, or movie clip that you create once in the Flash environment. This symbol can be reused throughout the document or in other documents. A symbol can include artwork that you import from another application. Any symbol that you create, automatically becomes part of the library for the current document.

e. Define: (i) movie (ii) scene

Ans. i) Movie is composed of many scenes which are executed in a sequence
ii) Scene is one screen that is made by the user.

2) Write the steps needed to create a new movie.

Ans. Steps needed to create a movie are:

- 1) Select any tool from the palette and set its colour. Draw the tool.
- 2) Click on any frame in the Timeline e.g. 50th frame and press F6 key from the keyboard.
- 3) Now select layer (blue area) by single click on Time line.
- 4) Right click on black area on Timeline and select Create motion between option.
- 5) Drag and drop the drawn tool to different place on stage area.
- 6) Save your file by using File menu → Save

Activity based on Unit 11

1) Ask the students to create animation for the following tasks:

- i) A car is moving
- ii) Falling dude
- iii) Text moving on the screen

Suggested Answers to Model Paper Summative Assessment (Units 1-4) on page 61

1) Fill in the blanks: (05 marks)

- a. backup
- b. 4.7GB, 17 GB
- c. banks
- d. Page numbering, document
- e. Portrait, Landscape
- f. Add Hardware
- g. interface

2) Answer the following questions: (25 marks)

a. Explain peripheral devices and give examples.

Ans. All the input, output, processing and storage devices are called peripheral devices. Their examples are keyboard, mouse etc. for input devices; printer, monitor etc. for output.

b. How are scanners and digital cameras helpful as input devices?

Ans. Scanner is an input device that scans text, pictures, etc. and converts them into a digital form to be understood by the computer. Similarly, digital camera takes the photograph of an object and stores it in digital form that can be used by the computer.

c. Write the steps to change the Display Settings. Include all the options.

Ans. Display Settings can be changed by double clicking the Display icon in Control Panel. It has a number of options present in the tabs.

The **Desktop** tab changes the background of Windows desktop. The background can have a picture called wallpaper.

The **Screen Saver** tab helps in configuring screen saver for the monitor. It appears when there is no action for specified time duration.

The **Appearance** tab helps in changing the appearance of desktop, program, window, documents window and dialogue box.

The **Settings** tab provides options of viewing and changing display settings like colour quality and screen area.

d. Discuss a few options of Control Panel and discuss their utility.

Ans. Control Panel is an important feature of Settings menu. It has icons to control, install and remove hardware. Some of the most commonly used options are explained below:

i. **Add or Remove Programs** option is present in Control Panel and is meant to install new programs or uninstall programs that are not needed or not working properly. To add a new program select the location of setup files and the program will be installed. To remove any program, select the program and click on Remove button.

Suggested Answers to Model Paper Summative Assessment

- ii. **Date and Time** option is used to change date and time of the system which can be used in many applications.
- iii. Double clicking **Display** icon displays a window called Display Properties having the most commonly used options like changing wallpaper, screensaver, appearance of windows etc.
- iv. **Add Hardware** allows installing hardware or making changes in the existing hardware.

- e. **Why are page breaks used? Write the steps for inserting page breaks.**

Ans. Page breaks are automatically inserted when a page is completely filled with text or graphics. The steps are:

- Position the cursor at the location where Page break is to be inserted.
- Click Insert menu → Select Break
- Break types option → Select Page break

- 3) **Differentiate between:** (06 marks)

- a. **CD and DVD:**

CD stands for Compact Disk. It helps in storing software, songs etc. and has a storage capacity up to 700 MB.

DVD stands for Digital Versatile Disk. It has a high storage capacity up to 17 GB and is popular because it can store good quality movies.

- b. **Floppy Disk and Hard disk:**

Floppy disk is a portable medium which stores data up to 1.44 MB.

Hard disk is used to store large amount of data mostly in GBs and is fixed inside the system unit.

- 4) **Write short notes on:**

(12marks)

- a. **OMR:**

Optical Mark Reader (OMR) is an input device that can scan and identify a specific type of mark made with a special pencil or ink. It is used to check multiple choice questions (MCQs).

- b. **Windows XP:**

Windows XP is more advanced than previous versions of Windows. It is faster in execution and has better graphics. It has some built-in computer management tools and detailed help topics.

- c. **Hyperlinks:**

Hyperlink is a text that looks different as it is of different colour and is underlined. When the mouse pointer is positioned over a hyperlink, the pointer shape changes to a hand. Clicking it displays text in same or another file or a webpage.

Suggested Answers to Model Paper Summative Assessment

d. Page setup:

Page Setup is an option in File menu of MS- Word that is used to change the layout of page. This option is used to change Margins (Top / Left / Right / Bottom), Page Orientation (Portrait / Landscape), Paper Size (A4 / Legal) etc.

5) Write True or False:

(02 marks)

- a. T
- b. F
- c. F
- d. F

(Units 5-7) on page 90

1) Write True or False:

(09 marks)

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

2) Fill in the blanks:

(09marks)

- a. sorting
- b. cell reference
- c. computer programmer
- d. machine oriented
- e. binary digits
- f. PRINT
- g. remarks / REM statements
- h. String constant

3) Answer the following questions:

(16 marks)

a. What is sorting? In how many ways can data be sorted?

Ans. Arranging data in ascending or descending order is called sorting. Sorting can be done in two ways.

- (1) Sorting on one column
- (2) Sorting on more than one column

b. Explain all three types of cell references with examples.

Ans. The three types of cell references are:

(1) Relative reference:

In relative cell reference, when the formula or function is copied and pasted to another location, the cell reference in the pasted cells changes automatically. This is the default reference.

(2) Absolute Reference:

In absolute cell reference, when the formula or function is copied and pasted to another location, the cell reference in the pasted cells remains constant. Absolute cell reference in a formula always refers to a cell in a specific location.

Suggested Answers to Model Paper Summative Assessment

(3) Mixed Reference

A mixed reference has an absolute column and a relative row, or absolute row and a relative column. If the position of the cell that contains the formula changes, the relative reference changes but absolute reference remains constant.

c. What is a low level language?

Ans. A low level language is a language easily understood by the computer. It is machine dependent.

d. What is a high level language? Write some of its advantages.

Ans. A high level language is easily understood by the humans. Its advantages are:

- 1) Programs written in high level language are easier to understand.
- 2) It is easier to find and remove errors in a high level language program.
- 3) Programs written for one machine can run on other machines easily.

e. What is the function of the following statements?

- i. CLS: CLS is used to clear the screen.
- ii. REM: REM statement is used to give remarks in the program.
- iii. INPUT: INPUT statement is used when the program needs values to be entered by the user.
- iv. PRINT: PRINT statement is used to display result on the screen.

f. List the arithmetic operators used in QBASIC.

Ans. The following arithmetic operators are used in QBASIC.

- i. + (Addition)
- ii. - (Subtraction)
- iii. * (Multiplication)
- iv. / (Division)
- v. ^ (Exponential)

4) Write short notes on: (08 marks)

a. BASIC:

BASIC stands for Beginner's All-purpose Symbolic Instruction Code. It is a very simple computer programming language.

b. LOGO:

LOGO stands for Language Of Graphic Orientation. It is used to draw figures and do sums.

c. JAVA:

Java is a modern programming language developed by Sun Microsystems. It uses the concept of object oriented programming.

5) Write the following programs and execute them. If they run properly without errors, write them on a chart and paste on the wall of your room. (08 marks)

a. Program to print the product of three numbers.

Ans. CLS

A% = 3

C% = 5

PRINT R%

B% = 4

R% = A% * B% * C%

Suggested Answers to Model Paper Summative Assessment

b. Program to print your home address.

Ans. CLS

```
PRINT "MY ADDRESS IS ";
PRINT "Flat No. 105, Saima Apartments, DHA"
```

c. Program to find the circumference of a circle. (Take help of your teacher/elder)

Ans. CLS

```
INPUT "Enter radius of the circle", R%
```

```
P! = 3.142
```

```
C% = 2 * P! * R%
```

```
PRINT "Circumference of circle "; C%
```

d. Program to find the area of a rectangle.

Ans. CLS

```
INPUT "Enter length of the rectangle", L%
```

```
INPUT "Enter breadth of the rectangle", B%
```

```
A% = L% * B%
```

```
PRINT "Area of rectangle"; A%
```

(Units 8-11) on page 125

1) Write True or False:

(06 marks)

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

2) Fill in the blanks:

(10 marks)

- a. steps
- b. important / helpful
- c. text
- d. container
- e. terms / words
- f. Inbox
- g. deleted
- h. Eraser tool
- i. Stage

3) Answer the following questions:

(18 marks)

a. What is an algorithm?

Ans. Algorithm is the step by step process of solving any problem.

b. Write any three advantages of algorithm.

Ans. Advantages of algorithm are:

- 1) They are easy to understand.
- 2) They are easy to implement.
- 3) They are easy to modify.

Suggested Answers to Model Paper Summative Assessment

c. **What is the purpose of HTML?**

Ans. It is a simple and easy to learn language that is needed to develop webpages.

d. **What are HTML elements?**

Ans. The content typed along with the start tag and the end tag is called HTML element e.g. ... , <BODY> ... </BODY>

e. **Define attributes of a tag by giving an example.**

Ans. Attributes of a tag provide additional information about HTML elements. They are always written in the opening tag. e.g.

In the above example, the attribute for is align and its value is left.

f. **Write the advantage of using e-mail.**

Ans. Advantages of email are:

- It is cost effective and faster method.
- It can reach any part of the world within few seconds or minutes.
- This service is provided free of cost.
- No one can read your messages until that person knows your password.
- Many things like letters, music, programs, images etc. can be sent easily.

g. **Write some features of e-mail programs.**

Ans. E-mail programs allow you to compose a mail. This can be done when user clicks on New or Compose button. It opens a window.

- 1) Type the e-mail address of the user in box after To.
- 2) If the recipients of the e-mail are more, then their addresses can be typed in Cc separated by commas or semicolons.
- 3) Type the topic or subject of your mail in Subject.
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h. **What is Timeline?**

Ans. Timeline is an important window of Flash that is needed to layout the sequence of movies.

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Ans. Frame is the smallest unit of Flash movie (animation) and is represented as a small rectangle on the right side of Timeline window. There are two types of frames in Flash frames and key frames. Key frames are frames in which changes in animation are defined.

4) **Write short notes on:** (08 marks)

a. **Searching techniques:**

Searching techniques involve the methods that are applied in order to find anything. Boolean operators like AND, OR, NOT, AND NOT are used to search the desired data. Using inverted commas around the search criteria, narrows down your search.

Suggested Answers to Model Paper Summative Assessment

b. Search engines

We can search for information on the Internet using websites that help in locating words or terms typed by the users. These websites are called search engines. Some popular search engines are www.google.com, www.yahoo.com, www.altavista.com etc.

5) Write the tag and its attributes for the following tasks. (08 marks)

a. To describe the webpage as HTML document.

<HTML> ... </HTML>

b. To align the text at the top of the webpage.

<p align = "top"> -- </p>

c. To give title 'My webpage'.

<TITLE> My webpage </TITLE>