Computer Wizard

Teacher's Manual

Class 6

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Contents

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Lesson 1 : Introduction to computer and Computer Languages

A. Multiple choice questions:

1.	electronic	2.	China
3.	binary	4.	1958
5.	Assembler	6.	Device Driver

B. State true or false :

1.	True	2.	False	3.	True
4.	False	5.	False		

C. Fill in the blanks :

1.	palmtop	2.	Hardware
3.	Mini Computer	4.	Language Processor
5.	Computer		

D. Answer the following questions in short:

1. A computer is an electronic device which consist of Hardware and Software.
2. First-generation computers relied on binary-coded language, which is also known as the machine language (i.e. language of 0s and 1s), to perform operations.
3. Every computer system comprises the following components :
   * Input Unit * Output Unit
4. Language processors are those software programs that translate programming languages to a machine understandable form.
5. Various high level languages are BASIC, COBOL, FORTRAN, C, C++.

E. Answer the following questions in detail :

1. The computer used in different generations are :
   First Generation (1940-56) – Vacuum tubes
   Second Generation (1956-63) – Transistors

Third Generation (1964-70) – Integrated Circuits
Fourth Generation (1970-till date) – Microprocessors
Fifth Generation (Present and Beyond) – Artificial Intelligence

2. INTERPRETER :

An interpreter translates a program one line at a time and executes the translated instruction before proceeding to next lines.

It converts a high level language program into machine language line by line.

While translating the interpreter keeps checking for errors and stops if it finds one.

COMPILER :

A compiler translates the entire program written in a high level language into a machine language in one go.

If the conversion fails due to errors present in program all the errors are removed and the program is recompiled.

3. Utility software is a computer software designed to help in the management and tuning of operating systems, computer hardware and application software. It is designed to perform a single task or a multiple of small tasks. Examples of utility software's include Disk defragmenters, System Profilers, Network Managers, Application Launchers and Virus Scanners.

4. Following are the characteristics of Fourth Generation computers :

- Use of microprocessor-based systems.
- Very small in size.
- Cheapest among all the other-generation computers.
- Portable and quite reliable.
  Hardware failure is negligible, so minimum maintenance is required.
- Production cost is very low.

5. Machine Language : This is the language (in the form of 0's and 1's called binary numbers.) understood directly by the computer. It is machine dependent. It is difficult to learn ad even more difficult to write programs.

   Assembly Language : Assembly language programming is simpler and less time consuming than machine language. It is easier to locate and correct errors than machine language. It is also machine dependent.

6. System Software :

   - System software refers to the files and programs that make up your computer's operating system.
   - The programs that are part of the system software include assemblers, compilers, file management tools, system utilities, and debuggers.
   - The system software is installed on your computer when you install your operating system.
   - System software runs at the most basic level of your computer, it is called "low-level" software.

   Application Software :

   - Application software is a program or group of programs designed for end users.
   - These programs are divided into two classes: system software and application software.
   - "While system software consists of low-level programs that interact with computers at a basic level, application software resides above system software and includes database programs, word processors. spreadsheets, etc.
   - Application software is a set of programs necessary to carry out operations for a specified application. These are the programs written by programmers to enable computers to perform a specific task.

Lesson 2 : Formatting with MS Word

A. Multiple choice questions:

1.	information	2.	Drop Cap
3.	5	4.	Format
5.	Vertical	6.	Thesaurus

B. State true or false :

1.	True	2.	True	3.	False
4.	True	5.	True	6.	True

C. Fill in the blanks :

1.	MS Word	2.	Header
3.	Ctrl + Alt + F	4.	Drop cap
5.	Preset	6.	dictionary
7.	Page orientation		

D. Answer the following questions in short:

1. MS Word is a word processing program. The purpose of MS Word is to type and save documents
2. Headers and footers are parts of a document that contain special information such as page numbers and the total number of pages, the document title, company logo, any photo, etc.
3. A Format Painter is a very useful tool that helps to copy a format from specific portions of your document and apply it to other portions of your document with a few clicks.
4. Thesaurus is a dictionary of synonyms, words and phrases that mean the same thing as a particular word or phrase. It is just like a dictionary and can be used to replacing a word with one of its synonyms.

E. Answer the following questions in detail :

1. Steps to use Format Painter :
   - Select the text or graphic that has the formatting that you want to copy.
   - On the Home tab, in the Clipboard group, click

Format Painter. The pointer changes to a paintbrush Icon.

- Select the text or graphic that you want to format.
- To stop formatting, press ESC.

2. Click anywhere on the paragraph you want to indent left and click Increase Indent button available on Home tab or simply press Ctrl + M keys. You can click multiple times to create deeper indentation.
3. Steps to use Drop Cap
   - Click on Insert tab.
   - Click on the Drop Cap option.
   - Select the Dropped option from the Position box.
   - Select the desired font of the dropped letter from the Font: drop-down list in Option section.
   - Select the desired option from the Lines to drop: drop-down list.
   - Increase the distance between the text and the dropped letter with the help of Distance from text: drop-down list.
   - Click on OK.
4. A Tab Stop refers to a preset text position. The Tab Stop feature allows you to set left, center, right, decimal, or bar tabs to line up columnar information.
5. Paragraph Alignment refers to how the left and right edges of a paragraph are aligned. There are four types of alignments :

   Left Alignment : Aligns the content with the left margin. This is default alignment in MS Word.

   Center Alignment : Align the context in the center of the document. It is used to add titles to documents.

   Right Alignment : Aligns the content with right margin. It is used to add header and footer.

   Justified : Distributes text evenly on both margin.

F. Match the following :

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

Lesson 3 : Spreadsheet

A. Multiple choice questions:

1.	office	2.	category
3.	formula bar	4.	worksheet
5.	remove	6.	size

B. State true or false :

1.	True	2.	False	3.	False
4.	False	5.	True	6.	True
7.	False				

C. Fill in the blanks :

1.	MS Excel	2.	modified
3.	gridlines	4.	grow font
5.	standard	6.	cell

D. Answer the following questions in short:

1. It adds up all the values in a range of cells.
2. It calculates the average of the cell values.
3. It counts the cells values.
4. Border formatting allows to add borders to individual cells to emphasize or define sections of a worksheet.

E. Answer the following questions in detail :

1. Excel is a spreadsheet program in the Microsoft Office system. Excel allows to create and format workbooks in order to analyse data and make more informed business decisions. Excel is used to perform various calculations and a variety of professional looking chart.
2. There are three ways to view a spreadsheet. Click on a page view button to select it.
   . Normal view is selected by default, and shows you

an unlimited number of cells and columns.

- Page Layout view divides your spreadsheet into pages.
- Page Break view lets you see an overview of your spreadsheet.

3. Steps to modified data :
   - Click on the cell having the data that needs to be changed.
   - Replace it with the new data.
   - Press the Enter key on the keyboard. You may also click on the Enter button on the Formula Bar.
4. Steps to change font size :
   - Select the cells you want to modify.
   - Click the drop-down arrow next to the Font Size command on the Home tab. The Font Size drop-down menu appears.
   - Move your mouse over the various font sizes. A live preview of the font size will appear in the worksheet.
   - Select the font size you want to use.
5. If the formula or a function is typed incorrectly, sometimes errors are displayed in the working cells or the Formula Bar in place of the results. A list of some common errors displayed in MS Excel, and their possible reasons are given following.

Error message displayed	Possible reasons
1. #####	a. The column is not wide enough to display the result or the value.
2. #DIV/O!	b. Division by zero error (invalid operation).

3. #N/A c. Data unavailable
4. #VALUE! d. Invalid data

F. Do yourself.

G. Do yourself.

Lesson 4 : MS PowerPoint

A. Multiple choice questions:

1. Blank presentation 2. consecutive
3. thumbnail 4. arrow
5. menus

B. State true or false :

1. True 2. False 3. True
4. True 5. True 6. True

C. Fill in the blanks :

1. Ms PowerPoint 2. thumbnail
3. design tab 4. Slide area
5. easily 6. subtitle

D. Answer the following questions in short:

1. MS PowerPoint is a presentation tool that supports text, shape, graphic, pictures and multimedia along with integration with excel.
2. A template contain a blank presentation with already designed colours and graphics for slides.
3. To create a New Presentation
   - Click the File tab and select New. Available Templates and Themes on your computer and the Office. com Templates site display.
   - Double-click the default, Blank presentation icon to open a new presentation based on this template. A Blank presentation opens in a new window .
4. The Slide and Outline thumbnail views can be used to enter, view, or move text or slides.

E. Answer the following questions in detail :

1. Consider the following points when creating a presentation.
   - Considerations
   - Purpose of the presentation
   - Audience
   - Room size and light
   - Equipment and software
   - Templates
   - Choose colour and a plain font (one to two fonts) that will display well in the room(s) where the presentation will be displayed.

2. When creating a presentation, the borders between the Slides, Notes, and thumbnails can be adjusted by dragging them with a mouse. When the mouse is positioned on a border, a two-headed arrow displays. The two-headed arrow can be used for resizing the Notes or Thumbnail panes. Presentation view buttons allow presentation slides to be viewed in the default "Normal" view, Slide Sorter view, Reading View, or as a Slide Show.

3. . Click the File tab and select New. Available templates and themes display.
   . Under Available Templates and Themes, click Blank presentation
   . Return to the Available Templates and Themes window by clicking the Home button. You will find View Templates for New Presentations.
   . Under Templates, click installed Themes and view the thumbnails.
   . Choose a desired theme and click Create. The selected theme is applied to the presentation.

4. To create a New Presentation

. Click the File tab and select New. Available Templates and Themes on your computer and the Office. com Templates site display.

. Double-click the default, Blank presentation icon to open a new presentation based on this template. A Blank presentation opens in a new window .

5. On the Themes Gallery, click the Colors drop-down arrow to select from built-in color schemes or Create New Theme Colors to create an entirely new theme or to modify colours for specific areas.

6. To Insert a table in a presentation :

- Click the slide where you want to insert the table.
- Click the insert tab.
- From the table group, click the table  icon.
- The Insert table gallery appears.
- Click Insert table.
- From number of column spin box, select the number of columns you want to add.
- From the number of rows spin box, select number of rows you want to add.
- Click OK

A table with specified number of rows and columns will be insert in your presentation.

F. The options for deleting a table are in layout tab :

- Select the table.
- Under Table Tools group, click layout tab.
- From Rows and Columns group, click Delete icon.
- Select the Delete Table option.

Lesson 5 : Introduction to Programming

A. Multiple choice questions:

1. three 2. flowchart 3. Algorithm

4. oval
5. flow lines

B. State true or false :

1. True
2. True
3. True
4. False
5. False
6. True

C. Fill in the blanks :

1. process
2. graphical
3. flow chart
4. Connector
5. independent

D. Match the following :

1. rectangle
2. diamond
3. parallelogram
4. circle
5. arrow

E. Answer the following questions in short:

1. Command is an instruction given to the computer to perform certain task.
2. A set of logically arranged commands is called computer program.
3. No proper syntax : An algorithm does not have specific rules of writing and thus do not have proper syntax.
4. Circle is used to connect the various sections of a flowchart to maintain its linear flow.

F. Answer the following questions in detail :

1. An algorithm is a set of instructions given to computer to solve any mathematical or logical problem. In short, it may be defined as a step-by-step procedure to solve any problem. It is always written in simple Language and precise so that anybody can understand it better.
2. We write a program on computer by following the given three steps :
   - Write an algorithm.
   - Design a flowchart based on the algorithm.
   - Conversion of flowchart into program.

3. Characteristics of an Algorithm
   - Input : It has a well defined input.
   - Output : It has a well defined output.
   - Finiteness : It has a fixed number of steps which are performed in time.
   - Well-ordered : All the instructions are given in right order.
   - Unambiguous : Each and every step has a clear and definite meaning without any ambiguity.
   - Effectiveness : It runs effectively in terms of memory usage, resources used and the time.
4. Three advantages of an algorithm are :
   - They are easy to understand and execute.
   - They make the removal of any type of error easy while solving out any problem.
   - They are free from any language specification.
5. Start or Stop box : It is used to indicate start or end of the algorithm.

   Input or Output box : It is used to indicate the input or output of data.

   Processing box : It is used to indicate the processing of data or some calculation.

   Decision box : It is used to indicate some decision making process on data.
6. Limitations of a Flowchart
   - When the program logic is quite complicated, flowchart becomes complex to understand.
   - Designing a flowchart requires more space than writing an algorithm.
   - If some modifications are required, the flowchart may require re-drawing completely.

G. Define the following :

1. Decision box : It is used to indicate some decision

making process on data.

2. Input or Output box : It is used to indicate the input or output of data.
3. Processing box : It is used to indicate the processing of data or some calculation.
4. Connector : It is used to connect the various sections of a flowchart to maintain its linear flow.

H. Make a flow chart :

1. Start
   Input A
   Input B
   A<B Print "B is smaller."
   Print "A is smaller."
   Stop
2. Start
   Input L, B, H
   Volume L < B < H
   Print Volume
   Stop

Lesson 6 : Introduction to Scratch

A. Multiple choice questions:

1. Sprite
2. stamp
3. pen up
4. Add extension
5. Menu bar

B. State true or false :

1. True
2. False
3. True
4. False
5. False

C. Fill in the blanks :

1. Scratch
2. Stage
3. Pen
4. Motion block
5. Code blocks

D. Answer the following questions in short:

1. Scratch is one of the easiest computer language. It ha a platform that can be downloaded for free.
2. Sprite is a small graphical character that perform actions in a project. It can be of any type, shape, color and size.
3. A script is created by joining blocks of either same or different categories. It is used to program a sprite.
4. Code Blocks are like puzzle pieces that are used to create projects. It contain many set of blocks that are used to program a sprite.
5. Add Extensions allows to add extension of other blocks.

E. Answer the following questions in detail :

1. The main components of scratch window are :
   a. Menu bar
   b. Sprite
   c. Stage
   d. Code Blocks
   e. Script
   f. Script Area
   g. Add Extension

   Sprite : It is a small graphical character that perform actions in a project. It can be of any type, shape, color and size.

   Stage : A sprite is placed on the stage to perform actions. It is the area where a sprite moves. It is divided into x and y coordinates.

   Code Blocks : These are like puzzle pieces that are used to create projects. It contain many set of blocks that are used to program a sprite.
2. The pen block menu adds a pen to the sprite that can draw different figures on stage. Blocks of Ten Block Menu are :

Pen Down | Pen Up

Change Pen Colour | Stamp

3. To save a project in scratch, follow these steps :
   - Click on file menu in menu bar and select the save to your computer option from drop down list.
   - The save as dialog box appears.
   - Choose the desired location where you want to save your project and type a suitable name in File name box.
   - Click on save button.
4. Pen Down : This block adds a pen to a sprite. As the sprite moves on the stage, it draws a line or curve along with it.

   Pen Up : This block removes the pen from sprite.
5. Stamp block is used to create a duplicate copy of sprite present on stage.

Lesson 7 : QBASIC

A. Multiple choice questions:

1.	programming	2.	CLS
3.	Print	4.	Run
5.	QBASIC	6.	program

B. State true or false :

1.	True	2.	False
3.	True	4.	False
5.	False	6.	True

C. Fill in the blanks :

1.	.exe	2.	Save as
3.	GW Basic	4.	Status bar
5.	Menu	6.	Program name
7.	Exit		

D. Answer the following questions in short:

1. Title Bar : The bar presents on the top of the window, is the Title bar. It displays the name of the program running along with the file name.
2. Menu Bar : The Menu Bar is present just below the Title Bar. The Menu Bar has the following main menus: File, Edit, View, Search, Run, Debug, Options and Help.
3. To Exit from the QBASIC, we can use the following steps.

   File menu > Exit option
4. Program Area is the actual workspace where you type a program.
5. . It is a good language for beginners.
   . This programming language is free.
   . This programming language is very simple and easy to learn.

E. Answer the following questions in detail :

1. QBASIC is a programming language. BASIC stands for Beginner's All-purpose Symbolic Instruction Code. It belongs to the category of high-level programming languages. In 1985, Microsoft released the version of BASIC language called QBASIC with its MS DOS 5.0 operating system. It basically supports Character User Interface (CUI).
2. The different components of QBASIC windows are :

   Title Bar, Menu Bar, Program Area, Program Name, Horizontal Scrollbar, Vertical Scrollbar, Status Bar, Immediate Mode Area.
3. The command 'CLS' stands for Clear Screen. It clears the content on the screen. To start the program, we use CLS command as the first line. This command can be used anywhere in a program.

4. . To write a simple program we can use CLS and PRINT.

```
CLS
A=3
B =4
PRINT A*B
END
```

. To execute or to run a QBASIC program click on Run menu—>Start option or Shift+ FS

. The output screen occurs.

5. . Click on File menu > Save As option.

. After clicking on the Save As option, a dialog box appears. Give the suitable name to the file. Select the location where you want to save the file.

. Click on OK.

6. Operators perform mathematical or logical operations on value. The operators provided by BASIC can be divided into five categories :

a. Arithmetic Operator

b. Relational Operator

c. Logical Operator

d. Functional Operator

e. String Operator

F. Define the following :

1. Status Bar : It displays the status of the current position of the cursor. It also displays the short-cut keys for the frequently used commands.

2. Menu Bar : The Menu Bar is present just below the Title Bar. The Menu Bar has the following main menus: File, Edit, View, Search, Run, Debug, Options and Help.

3. Vertical Scrollbar : It helps to scroll either to the beginning or the end of the screen to see the lines that are not visible.
4. Title Bar : The bar presents on the top of the window, is the Title bar. It displays the name of the program running along with the file name.
5. Immediate Mode Area : The mode in which a QBASIC statement is executed as soon as Enter key is pressed.
6. Program Area : It is the actual workspace where you type a program.
7. Horizontal Scrollbar : It helps to scroll either to the left or the right of the screen to see the program that is not visible.
8. Program Name : It is displayed just below the Menu Bar. By default, it displays 'Untitled'.

G. Output of the program :

1. Welcome to QBASIC
   QBASIC is a programming language
   Let's Enjoy
2. Welcome to QBASIC
   I got it
   It's intersting

Lesson 8 : Electronic Mail (E-mail)

A. Multiple choice questions:

1. 1972 2. internet 3. Email
4. password 5. attachment

B. State true or false :

1. True 2. False 3. True

4. False 5. True

C. Fill in the blanks :

1. Electronic mail 2. G-mail
3. attachment 4. outgoing
5. viewing attachments

D. Answer the following questions in short:

1. Email : Email, e-mail or electronic mail is the transmission of messages (emails or email messages) over electronic networks like the internet.
2. Domain Name System (DNS) translates Internet domain and host names to IP addresses.
3. Hostname is the name of the email server that provides email services.
4. Email address is stored on the mail server, thus we receive some junk mails. These are called unwanted Emails.
5. Attachments : Files that are sent through an e-mail.

E. Answer the following questions in detail :

1. We can use e-mail to
   - Send and receive messages : You can send message and anyone around the world if you know person's e-mail address.
   - Send Greetings : You can send greeting card through an e-mail.
   - Forward Messages : You can forward a mail received by you to another person.
   - Send Messages to group of People : You can send messages to group people at same time, at not extra cost.

2. E-mail address is a combination of a username and a hostname, and is written as username@hostname. For example parv@hotmail.com, samniceboyl@gmail.com.

   It is made up of

   User name : It can be any name given by the user.

   Host name : It is the name of the email server that provide email services.

3. ADVANTAGES OF EMAIL

   Convenient : One advantage of email over the telephone or regular mail is its convenience. You can send a message at any time of day or night.

   Immediate : Your message is delivered instantly from your computer to any other computer whether it is in your locality or halfway around the world.

   Inexpensive : Email is less expensive than telephone calls, faxes, courier or postal service.

   LIMITATIONS OF EMAIL

   Unwanted emails : Since your email address is stored on the mail server, you may also receive some unwanted junk mails.

   Privacy concerns : You can secure your email accounts by entering a password. However, if someone knows your password, the person can easily access your account and may read or send messages through it.

4. The Compose page is the page on which you can write and address your outgoing E-mail messages. To access the Compose page, click Compose in the left-side navigation panel or click the email icon next to a name in your address book.

5. It is important to close your email account properly. It ensures that no one else can access it without the

password. To sign out, you have to click on the Sign out option present at the top right corner of the screen. This will move you out of your account.

Lesson 9 : Internet

A. Multiple choice questions:

1. 1969
2. Internet
3. FTP
4. Website
5. Google

B. Fill in the blanks :

1. TCP
2. http://
3. servers
4. search engine
5. Internet
6. Protocol

C. State true or false :

1. False
2. True
3. True
4. True
5. False

D. Answer the following questions in short:

1. Internet explorer is a web browser that was developed by Microsoft. It allows user to access and navigate websites, view multimedia content, etc.
2. Hyper Text Transfer Protocol is the standard protocol for transferring web pages across the Internet.
3. Simple Mail Transfer Protocol is a set of communication guidelines that allow software to transmit email over the Internet.
4. Web browser is a software application in your laptop or your PC which is used to access the information from the Web.

5. URL identifies and locate any resource that is available on the internet.

   URL strings consist of three parts :

   a. Network protocol

   b. Host name or address

   c. File or resource location

E. Answer the following questions in detail :

1. Internet is a collection of computer networks and computer all of which are connected to each other so that user can share information and communicate to each other. Internet was founded by ARPANET (Advance Research Project Agency) in 1969.

2. To get connected to the Internet what you need is : PC

   A modem (Modulator - Demodulator) : It converts the digital signal from the PC to analog signal and vice-versa.

   A browser : It is a software like Internet Explorer.

   A telephone line : A telephone line is necessary as the messages are passed from one PC to the other via the telephone network. An ISP (Internet Service Provider) : An ISP is a company that provide you access to the Internet. Some of them are : BSNL, MTNL, etc.

3. Various uses of Internet are -

   Education : Internet plays a major role in education. Few basic education elements present on the Web are :

   - Online tutorials Web Publishing
   - Online Forums
   - Easy navigation from source to source.

   Entertainment : People often use personal blogs to update friends on their lives, and they use social

networking sites to keep track of and communicate with friends.

Streaming media : Internet allows to download media.

Online media on your TV : Internet allows to access online TV shows, movies and music on your TV.

4. A search engine is a software program that helps the people find the information they are looking for online. They are able to return results quickly by scanning the internet continuously. Popular examples of search engine are :

   Altavista : http://www.altavista.com

   Google : http://www.google.com

   Catalog Search Engines : These search engines structure the information into meaningful categories. An example of this type of search engine is http://www.yahoo.com.

   Index Search Engine : These search engines look for keywords or phrases and tries to match your entry against its database.

   An example is http://www.excite.com.

5. HTTP (Hyper Text Transfer Protocol) : HTTP stands for Hyper Text Transfer Protocol. It is the standard protocol for transferring web pages across the Internet.

   FTP (File Transfer Protocol) : FTP stands for File Transfer Protocol. It is used to transfer files across the Internet. FTP is commonly used by web developers to publish updates to a website.

   SMTP (Simple Mail Transfer Protocol) : SMTP stands for Simple Mail Transfer Protocol. It's a set of communication guidelines that allow software to transmit email over the Internet. The other purpose of

SMTP is to set up communication rules between servers.

F. Write the full form of the following :

1. ISP : Internet Service Provider
2. SMTP : Simple Mail Transfer Protocol
3. HTTP : Hyper Text Transfer Protocol
4. E-Commerce : Electronic Commerce
5. TCP : Transmission Control Protocol
6. FTP : File Transfer Protocol
7. www : World Wide Web