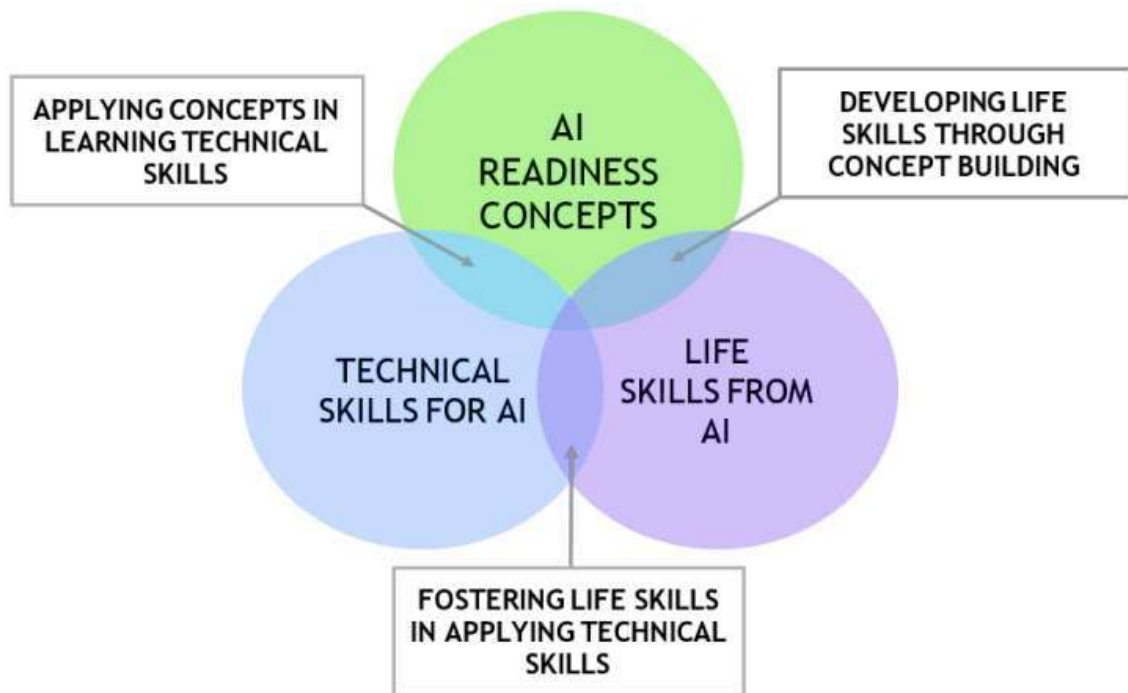


UNIT 3: ICT SKILLS



TYPES OF OPERATING SYSTEMS

An Operating System (OS) is an interface between a computer user and computer hardware. An operating system is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

Some popular operating systems are:

- DOS (Disk Operating System)
- Windows It is an operating system developed by Microsoft.
- Linux It is an operating system designed for personal computers. It is a free and Open Source Software
- Mobile operating Systems
 - ✓ Android
 - ✓ Symbian
 - ✓ Windows Phone
 - ✓ iOS

Following are some of important functions of an operating System.

- Memory Management
- Processor Management
- Device Management
- File Management
- Security
- Control over system performance
- Job accounting
- Error detecting aids
- Coordination between other software and users

The different types of operating systems are as follows:

Interactive (GUI-based) A graphical user interface is a user-friendly operating system in which commands can be entered by clicking/double-clicking/right-clicking a mouse. Windows operating system is an example of an interactive operating system.

Single-user, single-task operating system: This type of operating system allows only one user to do a task on the computer and one thing at a time.

Single-user, multi-task operating system: This type of operating system is used on Desktop computers, laptops, where a single user can operate on several programs at the same time. For example, Windows, Apple MacOS are examples of single-user multi task operating system.

Multi-user: A multi-user operating system enables multiple users to work on the same computer at different times or simultaneously.

Real Time: A real time operating system is used to control machinery, scientific instruments, like robots, in complex animations and computer controlled automated machines. A real-time operating system is a computing environment that reacts to input within a specific period of time. It manages the resources of the computer so that any particular operation is executed in the same amount of time every time it is executed.

Windows CE and Lynx OS are examples of real-time operating systems.

Distributed: A distributed operating system runs on a set of computers that are interconnected by a network. It combines the different computers in the network into a single integrated computer and storage location. Windows, UNIX, and LINUX are examples of distributed operating systems.

Windows 7 operating system:

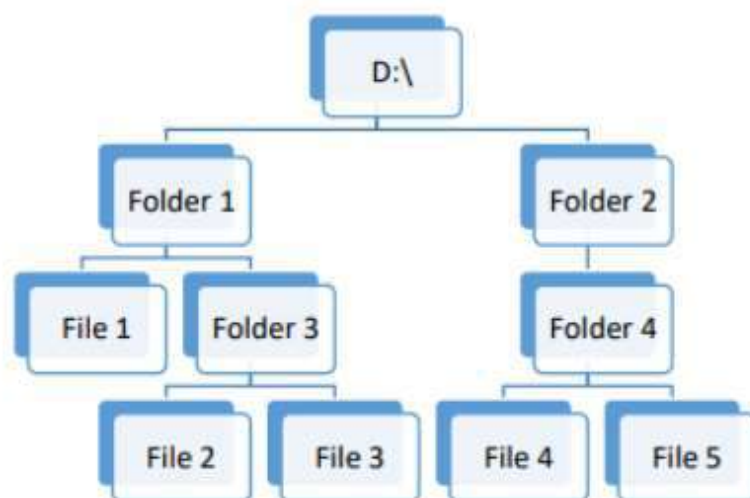
Windows 7 is an operating system developed by Microsoft and is used on personal computers. After loading Windows 7, the first screen that appears on the monitor is called desktop. From the desktop, you can access different components of Windows 7.

By default, Windows 7 has a picture for the desktop background. This is called **wallpaper**.

Small pictures on the desktop are called **icons**. These icons represent files, folders, applications, etc. At the bottom of the desktop is a long bar called the **Taskbar**. To the left of the taskbar is the Start button.

File Concept, File Operations, File Organization, Directory Structures And File System Structures

Everything you store on your computer is stored in the form of a file. There are specific naming conventions for naming files or folders, like characters that can be used, maximum number of characters, etc. Files can be separately placed into groups, called folders/directories. Each directory/folder can contain related files and/or sub-folders.



The steps to create a new folder are:

1. Double-click the Computer icon.
2. Select the drive in which you want to create a new folder. Say, Local Disk D:.
3. Window will open up showing files and folders in Local Disc D: Click New Folder on the toolbar.
4. A new folder is created with name New Folder highlighted
5. Type a name for the folder

To create a new file:

1. Right-click anywhere in the blank area of the right-column.
2. In the Shortcut menu, click New and select the type of the file you want to create.

To rename a file or a folder:

1. Right-click the file or the folder.
2. From the shortcut menu, select Rename option
3. Type the new name or edit the existing name and press the Enter key.

Or Just select the file/folder and press Function key F2.

To copy a folder or directory

You can copy a file or a folder in any one of the following ways:

1. Shortcut menu:

- a. Right-click the file or the folder you want to copy.
- b. Select Copy option from the Shortcut menu.
- c. Select the drive or the folder where you want to make a copy of the selected file or folder.
- d. Right-click and select Paste option from the Shortcut menu.

2. Drag and Drop method:

To copy a file or a folder, hold down the Ctrl key while dragging it to the new location.

3. Using Keyboard:

- a. Select the file or the folder.
- b. Press Ctrl + C to copy the file or the folder.
- c. Open the destination folder.
- d. Press Ctrl + V to paste the copied file.

To Move Files and folders

You can move a file or a folder in any one of the following ways:

1. Shortcut menu:

- a. Right-click the file or the folder you want to copy
- b. Select Cut option from the Shortcut menu.
- c. Select the drive or the folder where you want to move the selected file or folder.
- d. Right-click and select Paste option from the Shortcut menu.

2. Drag and Drop method:

To copy a file or a folder, select the file and drag it to a new location.

3. Using Keyboard:

- a. Select the file or the folder.
- b. Press Ctrl + X to cut the file or the folder.
- c. Open the destination folder.
- d. Press Ctrl + V to paste the copied file.

To permanently delete Files

You can permanently delete the contents of the Recycle Bin in any one of the following ways:

Right-click the Recycle Bin icon and then click Empty Recycle Bin

OR

1. Double-click the Recycle Bin icon.
2. The Recycle Bin window appears.
3. Click Empty the Recycle Bin.

To restore the files and folders

To recover a file from the Recycle Bin, right-click the file, and then click Restore.

Or

Select the file and click Restore this item

CARE AND MAINTENANCE OF COMPUTER

Regular maintenance of the computer system is very important.

Some of the maintenance activities are:

- Keep the components of the computer, like keyboard, mouse, monitor, etc. clean.
- Replace hardware that is not functioning properly
- Keep food items away from the computer
- Cables and chords should not be messed up
- Removing unauthorized software from the computer
- Take regular backup of the data
- Ensure backups are working properly by periodically restoring or checking of data. You should use external hard drive for backup of data on your computer.
- Run anti-virus periodically
- Keep anti-virus software up to date
- Do not overcharge the batteries
- Do not block the vents
- Always shut down the computer properly

Measures to protect Computer

- Regular scans should be done to check for viruses, malware, etc.
- An effective antivirus software should be installed in your computer.
- Always keep your anti-virus software updated so that it can detect new viruses. Full system scan should be done to periodically, preferably weekly to scan for viruses.
- A regular disk defragmentation should be done to remove all unnecessary information that slows down the computer.
- Disk defragmentation done at regular intervals helps the disc space to be used at an optimal level.
- Take regular backup of the data on your computer. In case the data is lost due to any reason.
- system failure, virus attack, etc., you can easily retrieve your data using backup files till your last update.

- System should be upgraded with new updates that were not there at the time of purchase, like, increasing RAM, to improve the performance. Also storage space should also be increased for storage of more information.
- If you are getting some disc errors, then make sure that temporary internet files are deleted from time to time.
- Software's should be updated regularly so that it works with maximum efficiency

ICT SKILLS OBJECTIVE QUESTIONS

1.To recover a file from the Recycle Bin, right-click the file, and then click _____.

- (a) Recover
- (b) Restore
- (c) Move
- (d) Undelete

Answer: (b) Restore

2. To restore a file from the Recycle Bin, select the file, and click _____.

- (a) Recover this item
- (b) Restore this item
- (c) Move this item
- (d) Undelete this item

Answer: (b) Restore this item

3.To paste a file/folder, right-click and select _____ option from the Shortcut menu.

- (a) Stick
- (b) Glue
- (c) Paste
- (d) Cream

Answer: (c) Paste

4. To copy a file/folder using Drag and Drop method, hold down the _____ key while dragging it to the new location.

- (a) Alt
- (b) Shift
- (c) Ctrl
- (d) Alt + Ctrl

Answer: (c) Ctrl

5. What is the shortcut keys to copy something?

- (a) Ctrl + X
- (b) Ctrl + C
- (c) Ctrl + Z

(d) Ctrl + V

Answer: (b) Ctrl + C

6. What is the shortcut keys to paste something?

(a) Ctrl + X

(c) Ctrl + Z

(b) Ctrl + C

(d) Ctrl + V

Answer: (d) Ctrl + V

7. When you _____ a file or a folder, a duplicate of the original file or folder is created at the new

location, and the original remains as it is.

(a) Copy

(b) Cut

(c) Rename

(d) Delete

Answer: (a) Copy

8. An _____ is a software that serves as an interface between the user and the computer.

a. operating system

b. application software

c. anti-virus software

d. microsoft word

Answer: a. operating system

9. Which software manages all the devices of a computer and keeps track of the status of the device,

whether it is busy or not?

a. operating system

b. application software

c. anti-virus software

d. microsoft word

Answer: a. operating system

10. Which software checks whether the device is functioning properly or not?

a. operating system

b. application software

c. anti-virus software

d. microsoft word

Answer: a. operating system

11. Which software controls software resources of the computer?

a. operating system

b. application software

c. anti-virus software

d. microsoft word

Answer: a. operating system

12. An _____ manages the computer memory and keeps track of which memory space is in use by which program and which space is free.

- a. operating system
- b. application software
- c. anti-virus software
- d. microsoft word

Answer: a. operating system

13. An _____ manages the computer memory and keeps track of which memory space is in use by which program and which space is free.

- a. operating system
- b. application software
- c. anti-virus software
- d. disk defragmentor

Answer: a. operating system

14. An _____ keeps track of the amount of disk space used by a specific file.

- a. operating system
- b. application software
- c. anti-virus software
- d. disk defragmentor

Answer: a. operating system

15. Which software allows you to create, copy, move and delete files?

- a. operating system
- b. application software
- c. anti-virus software
- d. disk defragmentor

Answer: a. operating system

16. Which of the following is not an operating system?

- a. DOS
- b. Windows
- c. Linux
- d. Disk Defragmentor

Answer: d. Disk Defragmentor

17. Which of the following is a free and open-source operating system?

- a. DOS
- b. Windows
- c. Linux
- d. None of these

Answer: c. Linux

18. Which of the following is not a mobile operating system?

- a. Android
- b. iOS
- c. Windows Phone
- d. Linux

Answer: d. Linux

19. Which of the following is not a mobile operating system?

- a. iOS
- b. Windows Phone
- c. Android
- d. None of these

Answer: d. None of these

20. Which of the following is not an interactive/GUI-based operating system?

- a. Android
- b. DOS
- c. Windows
- d. Linux

Answer: b. DOS

21. DOS stands for _____

- (a) Disk Operating System
- (b) Dot Operating System
- (c) Disk Open System
- (d) Disk Operating Secure

Answer: (a) Disk Operating System

22. Which of the following is Microsoft Product?

- (a) DOS
- (b) Windows
- (c) Android
- (d) Linux

Answer: (b) Windows

23. _____ operating system is an example of an interactive operating system.

- (a) Windows
- (b) DOS
- (c) Linux
- (d) None of the above

Answer: (a) Windows

24. GUI stands for _____

- (a) Graphical User Interface
- (b) Graphical User Interaction
- (c) Graphical User Interactive
- (d) None of the above

Answer: (a) Graphical User Interface

25. Which operating system allows only one user to do a task on the computer and one thing at a time?

- (a) Single-user, multi-task operating system
- (b) Single-user , single-task operating system
- (c) Multi-user
- (d) None of the above

Answer: (b) Single-user, single-task operating system

26. Which Operating System is used to control machineries like robots in complex animations and computer-controlled automated machines

- (a) Real Time
- (b) Multi-user
- (c) Single-user, multi-task operating system
- (d) Distributed

Answer: (a) Real Time

27. Examples of real-time operating systems is :

- (a) Windows CE
- (b) Lynx OS
- (c) Both of the above
- (d) None of the above

Answer: (c) Both of the above

28. Examples of distributed operating systems is

- (a) Windows
- (b) Unix
- (c) Linux
- (d) All of the above

Answer: (d) All of the above

29. _____ operating system enables multiple users to work on the same computer simultaneously.

- (a) Single-user , single-task operating system
- (b) Single-user, multi-task operating system
- (c) Multi-user
- (d) None of the above

Answer: (c) Multi-user

30. Which Operating System enables single user to operate on several programs at the same time.

- (a) Single-user, multi-task operating system
- (b) Multi-user
- (c) Single-user , single-task operating system
- (d) Real Time

Answer: (a) Single-user, multi-task operating system

31. Example of a Multi-Tasking Operating System is

- (a) Windows
- (b) Apple MacOS
- (c) Both of the above
- (d) None of the above

Answer: (c) Both of the above

32. An operating system in which commands can be entered by clicking/double-clicking/rightclicking a mouse is :

- (a) GUI-based
- (b) CUI-based
- (c) TUI-based
- (d) None of the above

Answer: (a) GUI-based

33. Examples of Mobile operating Systems is :

- (a) Android
- (b) Symbian
- (c) iOS
- (d) All of the above

Answer: (d) All of the above

34. The first screen that appears on monitor after loading OS is called _____

- (a) Icons
- (b) Desktop
- (c) Wall paper
- (d) None of the above

Answer: (b) Desktop

35. Small pictures on the desktop are called _____

- (a) Desktop
- (b) Symbols
- (c) Icons
- (d) Pictures

Answer: (c) Icons

36. Picture used for the desktop background is called _____

- (a) Wallpaper
- (b) Background image
- (c) Wall image
- (d) Desktop image

Answer: (a) Wallpaper

37. Start button is present on _____ side of the Taskbar.

- (a) right
- (b) left
- (c) top
- (d) bottom

Answer: (b) left

38. Bar present at the bottom of the desktop is called _____

- (a) Status bar
- (b) Scroll bar
- (c) Taskbar
- (d) None of the above

Answer: (c) Taskbar

39. Components of Windows 7 Desktop is/are :

- (a) Desktop
- (b) Wallpaper
- (c) Taskbar
- (d) All of the above

Answer: (d) All of the above

40. Which icons allows user to access all drives, files, and folders on the computer.

- (a) Recycle Bin
- (b) Computer
- (c) Application
- (d) Start button

Answer: (b) Computer

41. The main components of Taskbar is/are

- (a) Start button
- (b) Active Applications
- (c) Date/Time icon
- (d) All of the above

Answer: (d) All of the above

42. Deleted files and folders are stored in _____

- (a) Recycle bin
- (b) My Computer
- (c) Control Panel
- (d) None of the above

Answer: (a) Recycle bin

43. Everything we store in computer is stored in the form of a _____.

- (a) Folder
- (b) Sub folder
- (c) File
- (d) None of the above

Answer: (c) File

44. _____ is a way in which you give name to a file, store it and retrieve it.

- (a) Operating System
- (b) Formatting System
- (c) File System
- (d) None of the above

Answer: (c) File

45. Files can be separately placed into groups, called _____.

- (a) Folders
- (b) Directories
- (c) Both a and b
- (d) None of the above

Answer: (c) Both a and b

46. A _____ may contain one or more files and sub-folders within. This allows easy accessibility of files.

- (a) Folder
- (b) Directory
- (c) Sub-folder
- (d) None of the above

Answer: (c) Sub-folder

47. A new folder is created with the default name _____.

- (a) New Folder
- (b) New Directory
- (c) New
- (d) None of these

Answer: (a) New Folder

48. A _____ menu is appearing, when you right-click in a blank area of the desktop.

- (a) Shortcut Menu
- (b) Context Menu
- (c) Both (a) and (b)
- (d) None of these

Answer: (c) Both (a) and (b)

49. What is the shortcut key to rename a file or folder in windows?

- (a) Ctrl + R
- (b) F2
- (c) Alt + R
- (d) Ctrl + F2

Answer: (b) F2

50. To restore a file from the Recycle Bin, select the file, and click _____.

- (a) Recover this item
- (b) Restore this item
- (c) Move this item
- (d) Undelete this item

Answer: (b) Restore this item

Descriptive Questions (2 Marks)

1. What is ICT?

Answer – Information and Communication Technology (ICT) is an acronym for information and communication technology. ICT helps in the proper sharing, receiving, and processing of information, and an ICT device is a device that is used for processing, storing, and delivering information to others.

Examples of ICT devices are – Laptop, Desktop, Tablets and Smartphones.

2. Difference between Hardware and Software?

Answer – A computer system consists of two main parts – Hardware and Software

a. Hardware – Hardware is a physical part of a computer system. We can feel and touch the hardware devices. example – CPU, Mother Board, Hard Disk, Keyboard, Mouse, Printer etc.

b. Software – Software related to the programs which perform different types of tasks on the computer system. Program is a collection of Instructions. It also helps the computer to perform the specific task. Example – Open Office Base, Spreadsheet, Presentation etc.

3. How to increase Computer performance?

Answer – We frequently install a large number of applications, which slows down the computer.

Always attempt to uninstall unnecessary applications, temporary files, and antivirus software updates.

4. What is a Security Break?

Answer – Security break is leakage of information stored in a computer.

Your personal information can be lost or leaked in two ways –

We are not cautious when it comes to disclosing personal information via the internet. We share our account information and passwords on unsafe websites.

A person gets unauthorized access to our computer. This can happen at work if we don't log out before leaving the computer.

5. Differentiate between Hardware and Software ?

Ans.

Hardware: The physical components that we can see and touch.

Monitor, Keyboard are examples of Hardware

Software: It is a set of programs/instructions that perform a specific task

MS Paint, MS Word are examples of Software.

6. What do you mean by Operating System?

Ans. Operating System : It is a software that act as an interface between the user and the computer.

7. Give two examples of mobile operating system.

Ans. Two examples of mobile operating system :

a. Apple iOS

b. Google Android

8. Name two operating systems for laptops or desktop.

Ans. Two operating systems for laptops or desktop are:

- a. Ubuntu
- b. Microsoft Windows

9. Identify me

- a. I am a physical part of computer.
- b. I am a collection of instruction doing specific task.
- c. I am the software that starts working as soon as we switch on a computer.
- d. I am an input device used to type text, numbers etc
- e. I am a small device that you can use to move, select and open items on your computer screen.

Ans. a. Hardware b. Software c. Operating System d. Keyboard e. Mouse

10. Expand BIOS?

Ans. BIOS stands for Basic Input/Output System

11. What do you mean by Input device? Give two examples.

Ans. Those devices which are used to feed data/command into the computer are called Input device.

for example Keyboard and Mouse.

12. List the various types of keys available on Keyboard.

Ans. The various types of keys available on Keyboard are :

- a. Control keys
- b. Function Keys
- c. Alphabet Keys
- d. Numeric Keys
- e. Navigation Keys

13. When the _____ key is turned ON, it helps to overwrite characters to the right of the cursor.

Ans. INSERT

14. Name two keys available on keyboard which are used to remove typed text or characters.

Ans. Delete and Backspace

15. _____ key helps to move the cursor to the beginning of a new line.

Ans. RETURN or ENTER

16. Pressing _____ key opens the Start menu.

Ans. Windows

17. Name any two file extensions.

Ans. Two file extensions are : a) .txt b) .doc c) .jpg d) .xls

18. List the various threats to a computer and its data.

Ans. The various threats to a computer and its data are:

- 1 Virus
2. Phishing
3. Online theft
4. Cyber crime
5. Hacking

Descriptive Questions (4 Marks)

1. Objectives of Information and communication technology? Advantages and disadvantages of ICT.

Answer – Full form of ICT is Information and communication technology. The goal of ICT is to bridge the gap between parents, educators, and students by encouraging sustainable, cooperative, and transparent communication methods.

Advantages of ICT

- a. Enhanced the modes of communication
- b. Independent learning platforms Cost – efficient
- c. Enhanced data and information security
- d. Paperless – Eliminate the usage of paper
- e. Better teaching and learning methods
- f. Web – based LMS tools

Disadvantages of ICT

- a. Traditional books and handwritten methods are at risk.
- b. Managing courses online is difficult
- c. Teachers require experience to handle ICT
- d. Risk of cyber attacks and hacks
- e. Misuse of technology

2 What are the threats?

Answer – Threats are ways in which personal information from a computer can be released without our knowledge.

- a. Theft – Theft means stealing of information or hardware. These may be of three types:
 - i. Physical – Where a person may steal your desktop computer or laptop.
 - ii. Identity – A hacker gets your personal information and uses it to impersonate you. The hacker can use this fake identity to get access to your account information or engage in illegal activity.
- b. Software Piracy – This is stealing of software and includes using or distributing unlicensed and unauthorized copies of a computer program or software.

- i. Virus – Viruses are computer programmes that can corrupt data and software applications, as well as steal data from computers. Worms and Trojan Horses are two major forms of viruses.
- ii. Worms – Worms are viruses that replicate and spread to all files on a computer once they attack a computer. This makes it very difficult to remove them.

A Trojan Horse appears to be a useful software programme, but once it reaches a computer, it begins to behave like a virus and destroys the data.

iii. Online Predator – Online predators are persons who use the internet to trap you into unhealthy relationships. They could be older people appearing as your age who harass you into doing unlawful things online.

iv. Internet Scams – You may occasionally receive highly appealing offers claiming that you have won a large sum of money in a lottery and that you can claim your win by depositing a specific amount of money. When you deposit money with a credit card or through online banking, you not only lose the deposit money but your card / account information may be misused later.

What are the different types of keys in Keyboard?

Answer –

- a. Function keys – F1 to F12 are function keys in the keyboard, function keys are used for specific purposes.
- b. Control keys – SHIFT, CONTROL (CTRL), ALT, SPACEBAR, TAB AND CAPS LOCK are known as a control key, these keys are used as per the demand.
- c. Enter key – ENTER or RETURN keys are known as Enter key, depending on the brand of computer that you are using.
- d. Punctuation keys – It includes keys for punctuation marks, such as colon (:), semicolon (;), question mark (?), single quotation marks (‘ ’), and double quotation marks (“ ”).
- e. Navigation keys – END, HOME, PAGE DOWN, PAGE UP and Arrow keys are known as navigation keys, these keys are used to move up, down, left or right in the document.
- f. Command keys – BACKSPACE, INSERT (INS) and DELETE(DEL) are known as command keys. INSERT key allows you to overwrite characters to the right side.

The DELETE command key and BACKSPACE key are used to remove typed text, character, or any other objects from the right and left side of the cursor.

- g. Windows key – Windows key is used to open the Start menu.