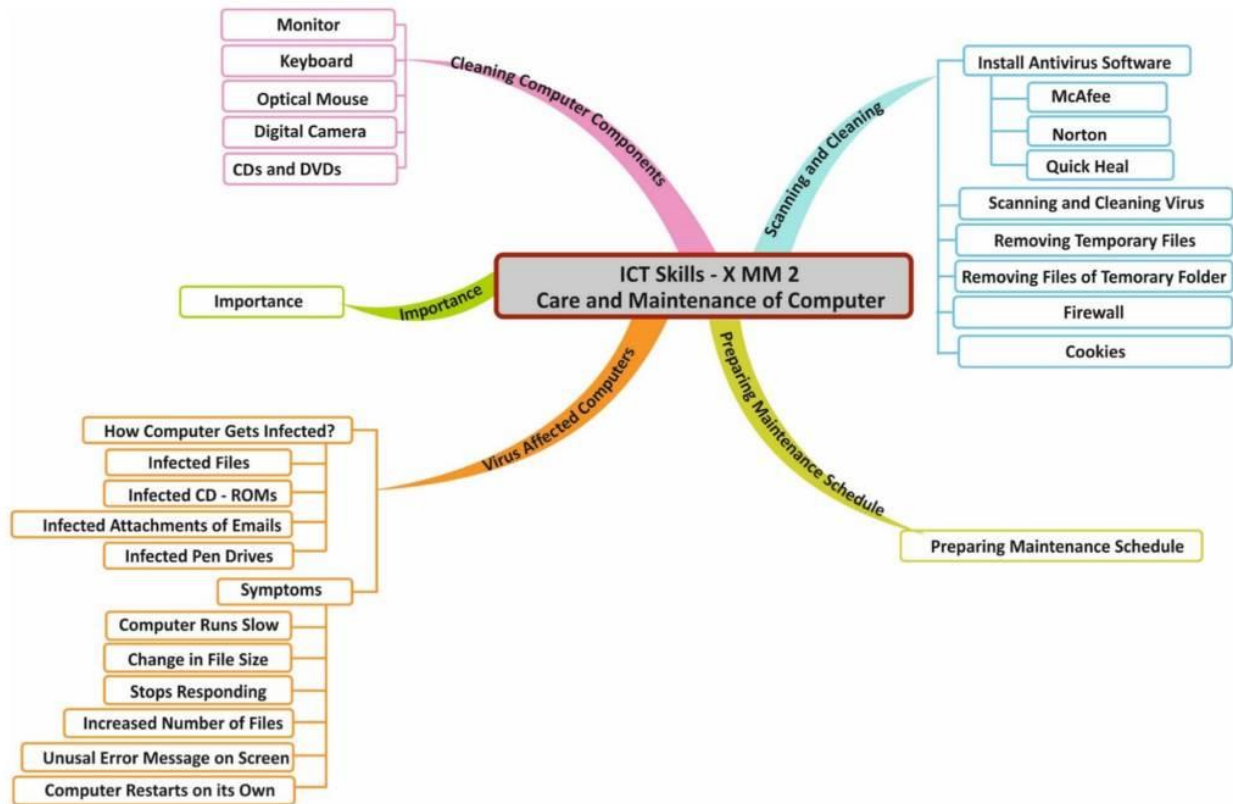


A.I. Chapter-3 (Class 10)

Basic ICT Skills



Operating System

An operating interface between user and computer which directs the processing of programmes and controls the operation of computer.

Some of the functions of Operating system are:

- It supervises all the hardware on a computer and monitors each device's status, including whether it's in use or not.
- It also checks whether the device is functioning properly or not.
- It also controls software resources of the computer.

- It controls how much memory is used by the computer, keeping track of which memory is free and which memory is being used by which software.
- It controls how a computer system's files and directories are organized.
- It keeps track of the amount of disk space used by a specific file.
- It allows you to create, copy, move and delete files.

Types of Operating Systems

The different types of operating systems are as follows:

Interactive (GUI-based) – An operating system that is user-friendly has a graphical user interface where commands can be entered by clicking, double-clicking, or right-clicking the mouse. Windows is the example of Interactive Operating System.

Single-user , single-task operating system – This kind of operating system only permits one person to use the computer at a time for one job.

Single-user, multi-task operating system – This kind of operating system is used on desktop and laptop computers, which allow one user to run multiple programmes simultaneously. Examples of single-user multitask operating systems are Windows and Apple MacOS.

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

Real Time – A computing environment that responds to input within a specific period of time. is known as a real-time operating system. It controls the computer's resources so that each operation is completed in exactly the same amount of time each time. Real-time operating systems include Lynx OS and Windows CE.

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.

Menu, icons, and task bar on the Desktop

The components of Windows are as follows –

Taskbar – The long horizontal bar at the bottom of the screen is called the taskbar. The Start button is located to the left of the Taskbar, and Date/Time is located to the right. On the Taskbar, you can also see icons for open programmes and a few shortcuts.

Start button – It is located on the left of the taskbar. Clicking the Start button opens the Start menu and provides access to programs and features.

Recycle Bin – The user's deleted files and folders are kept in the Recycle Bin. You can restore accidentally deleted files or folders from the recycle bin.

Creating and managing files and folders

Files – Every single thing you keep on your computer is kept as a file. A file system is a method for naming, storing, and retrieving files.

Creating 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.

Renaming folders and files

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.
4. Or Just select the file/folder and press Function key F2.
5. Right-click anywhere in the blank area of the right-column.
6. In the Shortcut menu, click New and select the type of the file you want to create.

Folder – Folders and directories are groups which contain single of multiple files. There may be related files and/or subfolders in each directory and folder. One or more files and other sub-folders may be located inside a sub-folder. This makes files easily accessible.

Creating Folder

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:
4. Click New Folder on the toolbar
5. A new folder is created with name New Folder highlighted.
6. Type a name for the folder

Renaming folders and files

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

Deleting files or folders

1. Click the file or the folder.
2. Press the Delete key.
3. Or Right-click and select Delete option from the Shortcut menu.

Apply Basic Skills for Care and Maintenance of Computer

Computer systems require maintenance in order to function properly. System failure may result from poor maintenance. You may be able to keep it in good working order by giving it routine care and maintenance. Installing updates, security, creating backups, and scanning are all part of routine system maintenance.

To keep the computer system's maintained you should follow the following activity –

1. Keep the computer dust free.
2. Do not eat or drink while working on the computer. Food or drink may spill on the system.
3. To keep the keyboard clean, make sure your hands are clean before using it.
4. CDs and DVDs should be handled carefully so that it does not get any scratches.
5. Keep keyboard covered when not in use.

Cleaning the computer components

Computer components needs proper care to last longer. Preventive maintenance increases the life of the components.

General precautions to be taken while cleaning the computer components are:

- Always Power Off the computer system before cleaning.
- Never spray cleaning fluid directly on the component of the computer. First spray the liquid on the cloth and then wipe the component.
- Do not allow the cleaning liquid to drip near the circuit board.
- Preferably use anti-static wrist band which helps to prevent building up of static electricity near electronic device.

Computer monitor

To clean the computer monitor, you can use a soft lint-free cloth, like cotton and water or special cleaning liquid. You should not spray water or cleaning liquid directly on the computer monitor as it may run through the seams.

Keyboard

The keyboard might be harmed by dirt and dust. If dirt gets inside the keyboard's keys, the keys could not work properly. Every now and then, move the keyboard while holding it upside-down to clean it.

Optical Mouse

With a clean, lint-free cloth, you can clean the optical mouse's bottom. Air or a cotton swab can be used to clean the lens region.

Digital camera

Never touch the camera's lens. You can use a soft lens brush or a soft, dry cloth to remove the dust. You can use a special lens cleaning solution to remove tenacious dust, but first you should apply it to a tissue before wiping the lens. Never spray fluid over the lens directly.

CDs and DVDs

Keep CD/DVD in proper case to prevent damage. If there is some dirt on the CD or DVD, it may not work at all. Finger prints and dirt can be removed by lightly rubbing with a clean lint-free cotton cloth.

Preparing maintenance schedule

- Regular maintenance of the computer system is very important.
- 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

Protecting computer against viruses

An Illegal programme known as a computer virus attaches to other programmes and modifies their behaviour. A virus might or might not cause harm. Some viruses damage computer programmes or delete data. Vital Information Resource Under Seize is referred to as VIRUS.

A computer can get infected with virus in any of the following ways:

- Infected files
- Infected pen drives
- Infected CD-ROMs/DVD-ROMs
- Through infected file attachment of e-mails

A computer virus cannot do the following:

- It cannot infect files on CD or DVD, if they are closed for writing.
- It cannot infect computer hardware like, keyboard, mouse, etc.

How do we know that our computer is infected with virus?

- Computer runs very slow
- There is change in the file size

- Computer often stops responding
- There is an increase in number of files (unusual)
- Unusual error message appears on the screen
- Computer restarts on its own

Scanning and cleaning viruses and removing SPAM files, temporary files and folders

- Install and use anti-virus software.
- Keep anti-virus software updated.
- Scan all the files that you download from the Internet
- Do not open e-mails of an unknown person/sender
- Don't allow any untrustworthy person to use your system.
- New use unknown pen drive/CD on your computer
- Never click on the windows that pop-up when you are surfing the Internet.

Preparing computer against virus

For an anti-virus program to be work effective do the following:

- It needs to run in the background at all times.
- Keep the anti-virus software updated so that it can recognize new viruses.
- Run full disk scans periodically.

Removing Temporary Files

When you use computer programmes, temporary files are created automatically. A TMP file is also known as Temporary file and it is created in the Microsoft Windows and Windows apps. Web browsers also create temporary files to store your browsing history.

1. Double-click Computer icon on the desktop.
2. The Computer Window opens.
3. Right-click Local Disk C: and select Properties option from the Shortcut menu
4. The Properties window opens. Click Disk Cleanup.

5. The Disk Cleanup for C: window appears
6. Click the Check box next to Temporary Files, Temporary Internet files, etc. that you want to delete.
7. Click OK.
8. A confirmation message will appear
9. Click Delete Files.
10. Windows will delete all the temporary files on the computer.

Removing files of Temporary Folder

1. Press Windows button + R on the keyboard.
2. The Run dialog box appears.
3. Type %temp%
4. The Temp folder opens Click Ctrl + A to select all the files in the folder. Press Delete key.
5. A message box appears. Click Yes to confirm.

Firewall

A computer firewall is a network security system, software, or programmable device that monitors and regulates incoming and outgoing network traffic in accordance with user-defined security rules.

Computers connected to a network, such as a LAN or the Internet, are more securely protected by firewalls. Typically, a firewall creates a wall between a trusted internal network and an unreliable external network, like the Internet. Each packet of data, whether it is coming in or going out, is examined by the firewall, which then decides whether it should be permitted to pass or stopped.

Cookies

When you visit an internet website, a user's computer stores a little file known as a cookie on it. These files are used to store information personal to a given client and website.

1. ICT Stands for _____.

- a. Inform and Communicate technology
- b. Information and Communication technology
- c. Inform and Communication technology
- d. Information and Communicate technology

Answer ←

b. Information and Communication technology

2. In a business, the best approach to keep records is _____.

- a. Handwritten on paper
- b. Written using a typewriter
- c. Written using a Computer
- d. None of the above

Answer ←

c. Written using a Computer

3. ICT Skills help us to _____, run our business and stay connected with our family and friends.

- a. Communicate
- b. Entertainment
- c. Both a) and b)
- d. None of the above

Answer ←

c. Communicate

4. A computer system consists of two main parts _____ and _____.

- a. Hardware
- b. Software
- c. Antivirus
- d. Both a) and b)

Answer ←

d. Both a) and b)

5. The physical parts that we can see and touch are called _____.

- a. Hardware

- b. Software
- c. Antivirus
- d. None of the above

Answer ←

- a. Hardware

5. Mobile devices, such as _____ and _____ are also computer systems with hardware and software.

- a. Mouse and Keyboard
- b. Smartphone and Tablets
- c. Typewriter and Pen
- d. None of the above

Answer ←

- b. Smartphone and Tablets

6. The most important software in any computer is the _____.

- a. Operating System
- b. Antivirus
- c. Office Package
- d. Photo Editing Software

Answer ←

- a. Operating System

7. Mobile devices also have an operating system like _____.

- a. Apple iOS
- b. Android
- c. Both a) and b)
- d. None of the above

Answer ←

- c. Both a) and b)

8. BIOS stands for _____.

- a. Basic Input/Output System
- b. Basic In/Out System

- c. Based on In/Out System
- d. None of the above

Answer ←

- a. Basic Input/Output System

9. Keyboard is an _____ device.

- a. Output device
- b. Input device
- c. Outer device
- d. Inner device

Answer ←

- b. Input device

10. _____ helps the computer to close all the applications, Operating system and turn off the computer.

- a. Sleep
- b. Shut down
- c. Hibernate
- d. None of the above

Answer ←

- b. Shut down

11. SHIFT, SPACEBAR, ALT, CAPS LOCK are _____ keys which perform special functions.

- a. Enter Key
- b. Function Key
- c. Control Key
- d. Navigation Key

Answer ←

- c. Control Key

12. _____ keys help to move the cursor to the beginning of a new line.

- a. Enter Key
- b. Return Key

- c. Both a) and b)
- d. None of the above

Answer ←

- c. Both a) and b)

13. _____ keys known as punctuation keys.

- a. Colon
- b. Semicolon
- c. Question mark
- d. All of the above

Answer ←

- d. All of the above

14. Example of navigation keys _____.

- a. Home
- b. End
- c. Page Up & Page Down
- d. All of the above

Answer ←

- d. All of the above

15. Example of command keys_____.

- a. Insert
- b. Delete
- c. Backspace
- d. All of the above

Answer ←

- d. All of the above

16. Which of the following does not require the use of a mouse?

- a. Turn on
- b. Right click
- c. Hover
- d. Drag and Drop

Answer ←

a. Turn on

17. What is the term used when you press and hold the left mouse key and move the mouse around?

a. Highlighting

b. Selecting

c. Dragging

d. Moving

Answer ←

c. Dragging

18. The following are the stages involved in starting a computer. Rearrange the stages in the proper sequence.

i. Desktop appears after login

ii. Login screen appears

iii. Power on Self-Test (POST) starts

iv. Operating system starts

v. Welcome screen appears

a. i), ii), iii), iv), v)

b. ii), i), v), iii), iv)

c. iii), iv), v), ii), i)

d. iii), ii), i), iv), v)

Answer

c. iii), iv), v), ii), i)

19. Extension of notepad file _____.

a. .txt

b. .bmp

c. .jpg

d. .psd

Answer ←

a. .txt

20. Extension of image file _____.

- a. .bmp
- b. .jpg
- c. Both a) and b)
- d. None of the above

Answer ←

- c. Both a) and b)

21. Which one of the following shortcut keys is used to paste a file?

- a. Ctrl + c
- b. Ctrl + p
- c. Ctrl + v
- d. Ctrl + x

Answer ←

- c. Ctrl + v

22. Which of the following is a valid file extension for Notepad file?

- a. .jpg
- b. .doc
- c. .text
- d. .txt

Answer ←

- d. .txt

23. What keys do you use to copy something?

- a. Ctrl+x
- b. Ctrl+c
- c. Ctrl+z
- d. Ctrl+y

Answer ←

- b. Ctrl+c

24. What are the best options for caring for computer devices?

- a. Keeping a Device Clean
- b. Prepare a Maintenance Schedule
- c. Do not overcharge your battery
- d. All of the above

Answer ←

- d. All of the above

25. You can take backup in the following devices_____.

- a. CD/DVD
- b. Flash Drive
- c. External Drive
- d. All of the above

Answer ←

- c. External Drive

26. To clean the computer from the virus we required _____.

- a. Antivirus
- b. Office Package
- c. Photoshop
- d. Operating System

Answer ←

- a. Antivirus

27. If we are using a computer for a long time we have to _____ unnecessary files and data from the computer.

- a. Delete
- b. Save
- c. Backup
- d. None of the above

Answer ←

- a. Delete

28. Sometimes we get mails from companies who are advertising a product or trying to attract you to their website. Such mails are called _____.

- a. Trash
- b. Inbox
- c. Spam
- d. None of the above

Answer ←

- c. Spam

29. What happens if you keep a device plugged in after it has been fully charged?

- a. It can break.
- b. It can overheat.
- c. It can stop functioning.
- d. Data can get corrupt.

Answer ←

- b. It can overheat.

30. What role does antivirus play in protecting your device?

- a. It can increase its performance.
- b. It can protect it from overheating.
- c. It can prevent data from getting corrupt.
- d. It can backup data.

Answer ←

- c. It can prevent data from getting corrupt.

31. Which option does not need to be enabled in order to keep a device cool?

- a. Make sure the computer's CPU fan is working.
- b. Keep the device unplugged when in use.
- c. Do not cover a laptop with a blanket.
- d. Avoid leaving the device in the sun.

Answer ←

- b. Keep the device unplugged when in use.

32. Which of the following is required for keyboard maintenance?

- a. Use a very dilute combination of soap and water applied with a non-abrasive cloth to remove stains from the keycaps.
- b. Turn the keyboard upside down and shake it to remove foreign material.
- c. Blow dust and other particles with the help of a blower.
- d. All of the above.

Answer ←

- d. All of the above

33. Computer security helps to protect computers from _____.

- a. Security Break
- b. Protect from Threats
- c. Protecting your data
- d. All of the above

Answer ←

- d. All of the above

34. What do you mean by Threats _____.

- a. Theft
- b. Virus
- c. Both a) and b)
- d. None of the above

Answer ←

- c. Both a) and b)

35. _____ are computer programmes that can corrupt data and software programmes, as well as steal information from a computer.

- a. Virus
- b. Theft
- c. Both a) and b)
- d. None of the above

Answer ←

- a. Virus

36. If someone steals your desktop computer or laptop, it is referred to as _____ theft.

- a. Physical
- b. Identity
- c. Software Piracy
- d. None of the above

Answer ←

- a. Physical

37. When a hacker takes your personal information and assumes your identity, this is referred to as _____ theft.

- a. Physical
- b. Identity
- c. Software Piracy
- d. None of the above

Answer ←

- b. Identity

38. _____ hits the computer, it acts like a virus, deleting data.

- a. Trojan House
- b. Online Predator
- c. Theft
- d. None of the above

Answer ←

- a. Trojan House

39. _____ are persons who try to attract you into inappropriate relationships.

- a. Trojan House
- b. Online Predator
- c. Theft
- d. None of the above

Answer ←

- b. Online Predator

40. Sometimes you may receive very attractive offers saying you have won a huge amount of money in a lottery and that you can claim the prize by depositing a certain amount of money known as _____.

- a. Trojan House
- b. Online Predator
- c. Theft
- d. Internet Scams

Answer ←

d. Internet Scams

41. To protect our data from theft and viruses we can take _____ measures.

- a. Use passwords to login
- b. Install Anti – Virus and firewall
- c. Encrypt Data
- d. All of the above

Answer ←

d. All of the above

42. Banks and companies usually keep their data in _____ format.

- a. Encrypted
- b. Firewall
- c. Using Password
- d. All of the above

Answer ←

a. Encrypted

43. If you want to create a secure password you have to use _____ in the password.

- a. Small and Capital letter
- b. Numbers
- c. Special Characters
- d. All of the above

Answer ←

d. All of the above

44. We can check secure websites using _____.

a. http://

b. https://

c. Www

d. None of the above

Answer ←

b. https://

45. What can you do to make sure your internet transactions are safe?

a. Lock your computer

b. Do not use pirated software

c. Give credit card or bank details only on safe websites

d. Use anti-virus

Answer ←

c. Give credit card or bank details only on safe websites

46. Which of the following is a trap for small children into unsuitable relationships?

a. Trojan Horse

b. Online predators

c. Worms

d. Anti-Virus

Answer ←

b. Online predators

47. What should a strong password consist of?

a. Name of a person

b. Only letters

c. Letters, numbers and special characters

d. Numbers and special characters

Answer ←

c. Letters, numbers and special characters

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. 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

3. 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.

4. What is BIOS?

Answer – BIOS stands for Basic Input/ Output System, It helps the computer system to identify (Self-test) the paraperaphal devices which are connected to the computer system and helps computers to load Operating System properly.

5. 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.

6. What is the purpose of Mouse?

Answer – The purpose of the mouse is –

a. Roll Over or Hover – Whenever we bring the mouse over the files, it shows the details of the file.

b. Click or Double Click – Mouse allows you to select, open or delete files and folders from the computer system.

c. Drag and Drop – Click on the file and drag and drop your file where you want.

7. What are files and folders in a computer system?

Answer –

a. File – File is a collection of information different types of files store different types of information. Every file has a file name and extension that identifies the type of file.

b. Folder – Folder is a collection of files or a group of files.

8. How to maintain a computer system?

Answer – Some simple ways to take care of computer system are –

a. Keeping a Device Clean – Always keep a device clean, such as the keyboard, the screen, and the mouse. Handle your gadget with care, keep it cool, and don't overload your battery.

b. Prepare a Maintenance Schedule – Make a schedule for computer maintenance.

Daily Maintenance

- a. Clean up your email inbox
- b. Save Important attachments and save in folder

Weekly Maintenance

- a. Clean your Keyboard, monitor, CPU and printer
- b. Backup your data

Monthly Maintenance

- a. Clean unused photographs
- b. Clean up Download folder
- c. Uninstall unused programs

- d. Run full system virus scan
- e. Run disk – cleaner software

Yearly / Annual Maintenance

- a. Clean up social media accounts
- b. Clean up e-mail contact list
- c. Update your operating System

9. 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.

10. 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.

11. 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.

12. How can we protect our data?

Answer – To protect our data from theft and viruses we can take the following measures –

a. Use Strong password in your account – Make your passwords difficult to guess. When creating a new password, attempt to use a combination of

- Small Character
- Capital Character
- Special Character
- Numbers

b. Install Antivirus and Firewall –Anti-virus software and a firewall protect your data from virus and from hackers.

c. Encrypt your data – Keep your information in an encrypted format to keep it safe from unauthorized users.

d. Open only secure site – Before visiting a website, make sure the address begins with https://. A website that begins with https:// is a secure website.