Name:.....Class:.....AdmNo

Computer Studies

Form 1

End Year Assignment – Nov/Dec – 2024

WEEK ONE ASSIGNMENT

1. a) State three factors to consider when choosing a monitor. [3]

b) What do the following acronyms mean in full: [6]
VDU

LCD

VGA

c) State Four differences between a CRT and a flat panel Screen. [4]

Cathode Ray Tube	*Flat panel screen*

d) Give four advantages of using a screen as an output device. [4]

2. a) Give four examples of hardcopy output devices. [4]

b) Give four reasons why one may go for a hardcopy output. [4]

c) State four differences between an impact and a non-impact printer. [4]

Impact printers	*Non-impact printers*

3. a) Name five peripheral devices of a computer connected to the system unit. [5]

b) Name three items that would be needed in order to listen to music from a computer. [3]

4. Give four reasons why laptops computers are quite popular than desktop computers among researchers.

5. Give six factors you need to consider before choosing a storage device. [6]

6. A Student in Form 1 describes the computers found in their school as useless. When the teacher asked him the reasons, he said that they did not have USB ports.

a) What does USB mean in full? [2]

b) Name Six devices that may be connected through the USB port. [6]

c) Give Two reasons why USB ports becoming quite popular with modern devices. [2]

7. Name and explain three main components of a computer system. [6]

WEEK TWO ASSIGNMENT

1. State Six hardware considerations when purchasing a computer system. [6]

2. List down four factors that dictate the cost of a computer system. [4]

3. a) State four components of a computer that can be upgraded. [4]

b) State three items that may be found on a warranty given to a computer buyer. [3]

4. a) What is an operating system? [2]

b) Give three examples of operating systems. [3]

c) State five functions of an operating system. [5]

d) Give four devices that work under the control of the operating system. [4]

5. a) What is the CPU? [1]

b) Name three main components of the CPU. [3]

c) Give two examples of computer buses. [2]

WEEK THREE ASSIGNMENT

INSTRUCTIONS:

1. COPY THE FOLLOWING LINK IN YOUR BROWSER AND WATCH THE FOLLOWING VIDEO ON OPERATING SYSTEM ON YOUTUBE
2. READ THE FOLLOWING NOTES AND ANSWER THE QUESTIONS BELOW

https://www.youtube.com/watch?v=-EBhktDi6sg&ab_channel=DONGICHAI-

OPERATING SYSTEM

Organisation of information using an Operating System

In this lesson we are going to demonstrate the concept of information management using Microsoft Windows as an operating system.

Windows organizes information into drives, folders/directories and files.
A file is a collection of related data or information given a unique name for identification. For example Your class register if keyed into a computer it may be given a name like (Form1Register).

A folder is named storage location for storing related files for ease of access. Some operating system refers to it as a Directory . For example all the registers for all the classes can be stored in a folder called (Students Registers). You can create more folders within a a folder, these are called subfolders.

A drive refers to a physical or logical storage location on an auxiliary storage media. For example the default hard disk is identified as a drive C: The drive letters range from A-Z and denoted by a letter followed by a colon.

In summary, Windows organizes information into files, folders (or even subfolders) and drives. The chart below shows a tree structure of information storage in drive C:

Creating folders and subfolders

To create folders you need to identify the drive in which the folder will reside.
For example let us create a folder called Registers in the local drive C. To do this:

1. Right-click My computer icon.
2. In the shortcut menu click Open. What do you observe?

- My computer window is displayed
- Drive C: is opened

2. In My computer window, double click drive C:

How many files and folders are displayed?

4.Click the file menu then point to New, then click folder. A folder with a name “New folder” is created. Note that the folder name is highlighted
5.Type the word Registers to replace the temporary folder name.
6. Press the enter key.
The folder Registers is created. Click on the start button
2. Select programs, accessories then windows explorer.

Note: You can also start windows explorer from the Start menu or by pressing the Windows logo key together with the letter E.
Look at the folder listing in the left pane. Some folders are preceded by a positive sign.
Click the positive sign. What do you observe?

1. Subfolders within the selected folder are displayed
2. The selected folder is moved one place down

On clicking the plus sign in front of a folder expands the tree and the sign is replaced by a - (minus) sign. This is referred to as Expanding the tree.
Click the - (minus) sign of the expanded list. What do you observe?

1. Subfolders within are hidden
2. The selected folder are deleted

On clicking the - (minus) sign in front of a folder collapses the tree and the sign is replaced by a + (plus) sign. This is referred to as Collapsing the tree.
To view the content of a folder, click a folder on the left pane of the explorer window.
Note: If a subfolder contains subfolder (s) in it, it will be preceded by a + (plus) sign.
Copying files or folders to a different location

1. To copy a file or folder to e.g. secondary storage proceed as follows
2. Insert the secondary storage medium into the drive.
3. Open the windows explorer.
4. From the left window pane, click the folder or file you want to copy.
5. From the Edit menu, click the Copy command.
6. Select the location; a folder on the secondary storge medium where you want to place the copy.
7. Click Edit menu once again then click Paste. A duplicate copy is placed in the new location

Moving files or folders to a different location
To move a file or folder to e.g. to a different location, proceed as follows:

1. Select the destination e.g. the floppy drive.
2. Select the file or folder you want to move.
3. From the Edit menu, click the Cut option.
4. Select the destination the file or folder is to be moved to.
5. Click Edit menu once more then click Paste. The target file or folder is moved to the new location

Renaming a file or folder

Renaming is the process of changing the name given to a particular file .
To rename a file:

1. Open the windows explorer
2. Select the file or folder you want to rename
3. From the file menu, select the command rename. The old name is highlighted
4. Type in the new name then press the enter key.

Look at the illustration that shows this procedure next.

Sorting files

Windows automatically sorts items alphabetically in ascending order or descending order. However you can sort the items manually by categories such as by name, date size, type and date modified. To do this;

1. Open the drive or folder that contains the items you want to sort
2. Click the view menu, point to Arrange Icons by, and then click the appropriate sort command.

Deleting files and folders

Delete refers to erasing or doing away with an item. This is a sensitive command that needs to be exercised with extra caution otherwise you may loose important data. Before we carry out this task, let us first explain what happens when you delete an item from removable device such as the floppy or from the hard disk.

Deleting items from the hard disk

When you delete any of these items from your hard disk, Windows places it in the Recycle Bin.

Items remain in the Recycle Bin until you decide to empty the recyle bin or restore back to their original location .
Therefore the Recycle Bin is a safety measure in windows that helps in holding files that may have been deleted from a hard drive by mistake.
Deleting items from a removable drive
Items deleted from a removable drive such as a floppy disk are not sent to the Recycle Bin.

To delete a file or folder;

1. Open Windows explorer and select the drive that contains the item to be deleted
2. Click the file or folder you wish to delete
3. From the explorer menu, click the File menu and then Delete. The File is deleted.

Note: You can also delete an item by right-clicking it and then clicking Delete.
Click Next to try and Delete using the shortcut menu.
Existing files can be deleted from their storage location and media.
To delete a file or folder from a computer;

1. Open the location where the file /folder is save
2. Click on the file to select
3. Go to file menu and select delete
4. The following dialogue box opens and prompting you to confirm delete.
5. Point and select yes to delete and NO to retain the file

When a file or folder is deleted it is temporarily stored in the recycle bin. A recycle bin is a system folder that acts as a buffer location for deleted files and folders.

Note1. there are shortcuts for carrying out these activities.

To delete a a file or folder tap the delete key from the keyboard and confirm delete dialog box opens.
You could also delete by pointing at the file/folder to select, right clicking and from the shortcut menu, clicking on delete

Note 2. Deleted files can be restored from the recycle bin.

To view deleted files in the recycle bin:

1. From the desktop, point and double-click on the recycle bin icon on the desktop to open it.
2. Select a file/folder you want to restore.
3. From the file menu, select restore.

You could also restore a file using shortcut menu. To do this:

Open the recycle bin, point to a file or folder you want to restore, right click and from the shortcut menu select restore.

Note 3. Files can be permanently deleted from the recycle bin. Once this is done these files and folder cannot be restored.
To empty the recycle bin, open the recycle bin by double clicking.

From the edit menu click on select all to select all the files and folders in the recycle bib
From the file menu, select delete.

A dialogue box opens and prompts you to confirm delete.

By clicking yes the content of the recycle bin are permanently deleted.
Searching for files or folders

Often users forget where they might have saved their files and folders . An operating system provides a way for searching files and folders under its control. some of the criteria used to search include:

1. name
2. date and time of modification
3. file type
4. size of the file

To search for a missing file or folder using a Windows operating system, the following procedure should be followed:

1. Click on the start button.
2. Select search
3. Click on files or folders.

The following are the search options for windows XP operating system:
The search options enables you to search for:

1. picture, music or video files
2. Specific application files such as word, excel, Access etc.
3. All files and folders in the computer.

Under each of these options, more distinctive options are provided such as keywords and search location.

Definition: It is a software that controls the hardware and the software resources and the activities that take place in a computer.

- Input/output devices eg Keyboard, mouse, printers

Operating systems are classified according to three criteria:

A single user operating system allows only one program to run at a time. This means that if you are working in a spreadsheet and want to write a memo, you must shut down the spreadsheet application and open up a word processor. This is annoying, especially if you need to quote some data from the spreadsheet in your memo! So new operating systems were designed that allowed multiple programs to run at the same time.

The simplest form is multi-tasking. What this really means is that the programs are taking turns with the processor. It allows a single user to have the spreadsheet and the word processor open at the same time, and even more. Now the user can see to copy data from one to the other. Much better!!

The computer must decide on how many time slices each program gets. The active program gets the most. Next is programs that are doing things but which aren't the foreground program. Last is programs that are open but aren't doing anything. They need a little bit of time every now and then to see if they are supposed to do something yet.

The next step up in complexity is multiple users. On a network several users can be using the same computer or even the same program on that computer. This is called time-sharing.

If a computer has multiple CPUs, it can do multiprocessing. Rather than a single CPU giving out turns to various programs, the different CPUs can work simultaneously. Speed increases immensely. Of course cost does, too!

It is possible for a computer to use more than one operating system through the use of virtual machines." Virtual" means it's not really there. But programs written for different operating systems are fooled into thinking their required operating system is present.

Originally the operating system was created by each company that manufactured a processor and motherboard. So each operating system was proprietary, that is, unique to each manufacturer. Problem: changing to a new computer meant your software had to be replaced! Not good marketing. So there was pressure early on to standardize things so that software could be transferred to the new (and of course better!) computer. This required more standardization in operating systems.

The winner in the PC market was MS-DOS, Microsoft's Disk Operating System, and its twin at IBM, PC-DOS, also written by Microsoft. Now it's hard to recall those days when each computer had its own unique operating system.

Windows 95 and Windows 98 are actual operating systems on their own. The previous versions of Windows use DOS as the operating system and adding a graphical user interface which will do multitasking. But with Windows 95 Microsoft released an operating system that can take advantage of the 32-bit processors.

Windows Me (Windows Millennium Edition) is an upgrade of Windows 98, release date Sept. 14, 2000. The system resources required for this operating system are significantly higher than previous versions of Windows.

Windows NT (the NT apparently came from New Technology) is an operating system for client-server type networks. The last version of NT has a user interface that is practically identical to Windows 95. Since Windows NT was designed for the higher demands of networks, it had higher demands itself for disk space and memory.
Windows 2000 is an upgrade of Windows NT rather than of Windows 98.

Windows XP is an upgrade to Windows 2000. It comes in two versions - Home and Professional. The Professional version contains all the features of the Home version plus more business features, like networking and security features. Windows Vista was released in early 2007. It has higher requirements for memory and processor speed than previous versions of Windows. Vista comes in several different flavors for home and business purposes.

Windows CE is for small devices like palmtop and handheld computers. Lite versions of a number of major applications are available to run on these devices. You can link your small computer to a regular one to synchronize documents and data.

The Apple Macintosh is a multitasking operating system that was the first graphical interface to achieve commercial success. The Mac was an immediate success in the areas of graphics production, and still commands the lion's share of that market. Apple made a major marketing error when they decided to keep their hardware and software under tight control rather than licensing others to produce compatible devices and programs. While the Apple products were of high quality, they were always more expensive than comparable products that were compatible with Microsoft's DOS operating system. This is an example of how a near lock on a market can be lost in a twinkling.

The current version is Mac OS X, which is version 10. Since January 2002, all new Mac computers use Mac OS X. Subversions are named Jaguar, Panther, Tiger, Leopard....

IBM's 32-bit operating system, OS/2, was a popular system for businesses with complex computer systems from IBM. It was powerful and had a nice graphical interface. Programs written for DOS and Windows could also run on this system. This system has never really caught on for PCs and is no longer marketed.

UNIX is an operating system developed by Bell Labs to handle complex scientific applications. University networks are likely to use UNIX, as are Internet Service Providers. A lot of people have experience with UNIX from their college work. Many computer old-timers love UNIX and its command line interface. But all those commands are not easy to remember for newcomers. X-Windows is a graphical interface for UNIX that some think is even easier to work with than Windows 98.

Linux is an operating system similar to UNIX that is becoming more and more popular. It is a open-source program created by Linus Torvalds at the University of Finland, starting in 1991. Open source means that the underlying computer code is freely available to everyone. Programmers can work directly with the code and add features. They can sell their customized version of Linux, as long as the source code is still open to others.

QUESTIONS

1. The central processor and peripheral devices of a computer system are coordinated by the operating system.

   (a) Define the term 'Operating system' (2 marks)

   (b) Other than the processor, list two other resources/components that an operating system manages. (2 marks)

   (c) There are several types of operating systems in use today. State two examples of operating systems with which you are familiar. (2 marks)

2. Explain why Operating systems are so important. (4 marks)
3. Explain any five basic functions of an operating system software. (5 marks)
4. Show the difference between the Control Unit of a processor and the Operating system in terms of functionality. (2 marks)
5. (a) Explain what is meant by system *Interrupt*? (1 mark)
   (b). Name any five examples of system interrupts and their possible causes. (10 marks)
   (c). Mention two advantages of using interrupts for input or output devices. (2 marks)
6. One of the tasks of an operating system is to allow communication between the computer and the user. State any four system messages from the computer to the operator. (4 marks)
7. (a) Why must an operating system be installed in the computer before installing any other software. (1 mark)

   (b) Differentiate between *scheduling* and *sequencing of tasks* by the operating system. (2 marks)
8. (a) Give three ways in which operating systems are classified. (3 marks)
   (b) Giving an example in each case, explain the following types of operating systems:

   i) Single-user / Single-tasking (2 marks)
   ii) Multi-user / Multi-tasking (2 marks)
9. (a) Give two examples of single-user operating system. (1 mark)
   (b) State any three computer software that can be classified as a Multi-user operating system. (3 marks)
10. A computer user may interact with a computer either through Graphical User Interface (GUI) or through typed commands.

    (a) State two features of a graphical user interface. (2 marks)

    (b) Give two advantages of using GUI based operating system over a Command line interface. (1 mark)

(c) Some computer systems still use Command line interfaces. State two advantages of command line interface. (2 marks)

WEEK 4 ASSIGNMENT

1) State three merits of Menu driven interface over a Command based interface. (3 marks)
2) What is a *Deadlock* in reference to operating systems? (2 marks)
3) Explain briefly the following concepts as used in the Windows environment:
   (a) Desktop. (2 marks)
   (b) Window. (2 marks)
   (c) Icon. (2 marks)
   (d) Sidekick menu. (2 marks)
   (e) Taskbar. (2 marks)
   (f) Task (2 marks)
4) Describe three methods of opening an icon into a window. (3 marks)
5) Distinguish between Operating system software and Utility software. (2 marks)
6) Differentiate between a Toolbar and a Status bar. (2 marks)
7) (a) Identify three functions of each of the following window components: (2 marks)
   i) Taskbar.
   ii) Title bar.
   (b) List and explain down the three parts of the windows Taskbar. (3 marks)
8) (a) Identify three Application software that are installed in your computer. (3 marks)
   (b) Give three ways you can start an application in Windows. (3 marks)
9) (a) Explain each of the following commands used to manage files and folders. (5 marks)
   i) Rename
   ii) Copy
   iii) Sort
   iv) Properties
   v) Delete.
   (b). Name the command one would use to repair cross-linked files in Graphical user interface software. (1 mark)
10) (a) What is disk formatting? (1 mark)
    (b) Why should precautions be taken while formatting diskettes? (1 mark)
11) Differentiate between Hard-sectored and soft-sectored disk. (2 marks)
12) Distinguish between disk compression and disk defragmentation. (2 marks)
13) (a). Define 'Folder/ directory tree' (1 mark)

(b). Give two examples of root directories you know. (1 mark)

(c) Give three uses of sub-directories or subfolders. (3 marks)

14) Draw a directory tree showing how files and folders are organized by an operating system.
(5 marks)

15) Identify two factors that you would consider when choosing an operating system for use in a computer.
(2 marks)

16) You are employed in an organization as a computer operator in the Accounts department. The following are some of the tasks you are supposed to perform:

- Data entry.
- Ensuring that data entered in the computer is stored in a well-organized manner.
- Backing up data.
- Monitoring hard disk space of all computers in the department.

(a) What is used in Microsoft Windows to store programs and files in a well-organized manner?
(1 mark)

(b) Explain two methods of backing up data into a storage device in Windows.
(2 marks)

(c) Identify two reasons why a user needs to know the space available for data storage in the hard disk.
(2 marks)

17) Explain how Windows organizes information in reference to files and folders. (1 mark)

18) Distinguish between System files and Application files. (2 marks)

19) Outline three reasons why it is important to first shut down the computer before turning it off.
(3 marks)

20) Outline the procedure of renaming a file or folder using windows operating system.
(3 marks)

21) Which keys in the keyboard should one press when he/she wants to:

i) Cut
ii) Copy
iii) Paste
iv) Rename an item

22) (a) What is meant by the term '*disk Partitioning*'? (1 mark)
(b) Give two reasons why the hard disk may be partitioned. (2 marks)

23) (a) State two purposes of the Recycle Bin. (2 marks)
(b) Give two advantages of using a password in Windows as an operating system.
(2 marks)

24) A computer specification has the following details:

Pentium III

1.44 MB Floppy disk drive

20 GB Hard disk

Full Multimedia

17” SVGA monitor

Pre-installed Operating system

Pre-installed Office Suite

(a). What is meant by: - (3 marks)

(i). 1.44 MB floppy disk drive.
(ii). 20 GB
(iii). 17” SVGA

(b). Which operating system might be pre-installed in this computer, and why? (2 marks)

25) A school organizes its work in directories. The directory WP contains the files CATS, EXAMS and ASSIGNMENTS. The directory SP contains the spreadsheet files. The directory DB contains the database files. The directory PROG is contained in the OTHERS directory. The directory WP also contains the PERSONAL directory. Given that the directory STUDENT contains directories SP, DB, WP and OTHERS.

(a). Draw the directory tree structure with C as the root. (7 marks)

(b). Write the path at which the contents of subdirectory DB can be erased or displayed. (2 marks)

(c). Write the path for the directory PROG. (2 marks)

(d). Give two reasons for storing files in directories and subdirectories. (2 marks)

WEEK 5 AND 6 ASSIGNMENT

1. (a) Define the following terms as used in computing: (2 marks)

i). System.
ii). Computer system.

(b) Differentiate between a Computer and a Computer system. (2 marks)

2. (a) List and explain three functional elements of a computer system (3 marks)
(b) Using a well-labelled diagram, give a descriptive illustration of a computer system. (7 marks)

3. (a). The diagram below represents the essential features of a computer system. Study the diagram and answer the questions that follow:

(i). Name the components A, B, C, and D (4 marks)

(ii). On the diagram above, indicate the direction of the data flow using arrows. (3 marks)

4. Give an example of a: (3 marks)

   i) Device that reads data.
   ii) Pointing device.
   iii) Voice input device.

5. (a) What are computer scanning devices? (1 mark)

   (b) Name the type of scanner used: (2 marks)

   i) To capture prices of goods at points of sale terminals in supermarkets and superstores.

   ii) To grade multiple choice examination

6. Briefly describe how each of the following I/O devices work.

   i) Tracker ball. (3 marks)
   ii) Touch screen. (3 marks)
   iii) Light pen. (3 marks)
   iv) Graphic (Digitizing) Tablet. (3 marks)
   v) MICR. (3 marks)
   vi) OCR. (3 marks)
   vii) Speech (voice) recognition device. (3 marks)
   viii) Speech (voice) Synthesizer. (3 marks)

7. (a) Explain the principle of a Kimball tag as a data input device. (3 marks)
   (b) Outline any two advantages of a Light pen as an input device. (2 marks)

8. (a) Identify two advantages and four limitations of the Speech recognition devices. (6 marks)
   (b) State two situations in which speech recognition devices may be useful as a method of data entry. (2 marks)

9. (a) What are turnaround documents? (1 mark)
   (b) Name any two data capture techniques that make use of turnaround documents. (2 marks)

10. Magnetic Ink Character Reader (MICR) technology uses the principle of magnetism to encode certain characters/data.

    i) Recommend one application areas where this technology is used. (1 mark)
    ii) Name any three data items that can be encoded using magnetized ink. (3 marks)

11. Name four factors one would consider when selecting a data input device. (4 marks)

12. (a) Describe three functions performed by the CPU. (3 marks)

    (b) Explain the functions performed by each of the following central processing unit elements.

i) Control Unit. (2 marks)
ii) Arithmetic and Logic Unit. (2 marks)
iii) Registers. (1 mark)
iv) The Main memory. (2 marks)
v) The System clock. (1 mark)

13. In reference to ALU, explain the meaning of *logic operations*, and give an example of this processing operation. (2 marks)

14. (a) Give four types of registers found in the CPU. (4 marks)

(b) Explain how the CPU registers may be used to carry out a basic calculation such as: 2 + 3 = 5 (4 marks)

15. State the function of each of the following computer bus. (3 marks)

(a) Data bus.
(b) Address bus.
(c) Control bus.

16. Computer systems are built from three types of physical components: Processor, memories and Input/Output devices.

i) State two tasks of a processor. (2 marks)
ii) State the functions of I/O devices. (2 marks)

17. (a) What is the computer Motherboard? (1 mark)
(b) State any four components found on the computer motherboard. (2 marks)

18. (a) What is a read/write drive? (2 marks)
(b) State any two types of computer drives, giving an example of a storage device used by each. (3 marks)

19. (a) Give two reasons why it is necessary for a computer to have secondary/backing storage facilities (2 marks)

(b) List three different examples of auxiliary storage devices. (3 marks)

20. (a) The hard disk is composed of *Platters*, *Hard disk Drive*, *Access arm*, *Motor device*, *Read/Write heads*, and *Spindle*. State the function of each of these parts. (6 marks)

(b) State three advantages of using hard disks as medium of storage. (3 marks)

(c) Describe three precautions you would take to avoid damaging the hard disk. (3 marks)

(d) Explain the internal mechanism of the hard disk in reference to disk platters and read/write head. (3 marks)

(e) Describe the structure of a hard disk in reference to cylinders, tracks and sectors. (3 marks)

21. (a) Write down two advantages of storing data in a magnetic disk over a magnetic tape. (1 mark)

(b) State two reasons why Magnetic tapes are not commonly used as computer data storage medium today. (2 marks)

22. Differentiate between:

i) Fixed and removable disks. (2 marks)
ii) Volatile memory and Non-volatile memory. (2 marks)
iii) Magnetic and Optical storage media. (2 marks)
iv) CD-ROM and Floppy disk. (2 marks)
v) Hardcopy and Softcopy. (2 marks)

23. Give three advantages of using a Scanner over the keyboard as an input device.(3 marks)

24. (a) Using a well-labelled diagram, differentiate between Sectors and Tracks as used in Magnetic disks. (4 marks)

(b) Draw a well-labelled diagram of a 3.5-inch floppy disk showing its parts. (7 marks)

(c) Explain four rules for handling magnetic disks. (4 marks)

25. (a) Give two uses of floppy disks in a computer system. (2 marks)
(b) Draw a labelled diagram to illustrate the internal structure of a diskette. (7 marks)

26. RAM and Magnetic disks are both Random access devices. List four differences between the two devices. (4 marks)

27. State any three main differences between Primary and secondary computer storage. (3 marks)

28. Giving an example, explain the term memory Volatility? (2 marks)

29. (a) State four functions of Read-Only memory (ROM) (4 marks)
(b) Give three characteristics of ROM (3 marks)

(c) Name two different types of ROM (2 marks)

30. Mention any four types of programs or facilities that are stored in the Read Only Memory. (4 marks)

31. (a) Outline three characteristics of Random Access memory (RAM). (3 marks)
(b) Name the two types of RAM clearly stating their differences. (3 marks)

32. Give two examples of special purpose memories found in the CPU. (2 marks)

33. Give two types of information that are found in the RAM. (1 mark)

34. What do the following phrases mean in reference to computers: (4 marks)

i) 2 Ghz processor speed.
ii) 128 KB Cache.
iii) 256 MB RAM
iv) 80 GB Hard disk

35. (a) List any four examples of Optical storage devices. (4 marks)
(b) Give two application areas that make extensive use of Optical disks. (2 marks)

(c) Give two advantages of a Digital Versatile Disk over a normal Compact disk. (2 marks)

36. (a) Explain two features of a DVD that enables it to store more information than a CD-R. (4 marks)
    (b) How many Optical disks of 720 MB storage capacity are needed to store 20 GB storage of hard disk data? (Give your answer to the nearest whole number). (2 marks)

37. (a) Define the term Multimedia. (2 marks)
    (b) List down four components required to make a computer multimedia. (3 marks)

38. Giving reasons in each case, suggest the most suitable backing store medium for each of the following:

    i) Data for payroll program. (2 marks)
    ii) Documents for a word processing program. (2 marks)
    iii) A company's financial records for the last four years. (2 marks)

39. (a) List any four examples of computer output devices. (2 marks)
    (b) Identify three functions of computer output devices. (3 marks)

40. Outline two advantages and two disadvantages of using a Monitor for output. (4 marks)

41. (a) Show two differences between a CRT monitor and a Flat-panel display. (2 marks)
    (b) Give three examples of flat-panel monitors available in the market today. (3 marks)

42. Describe five types of display video cards used in computers. (5 marks)

43. (a) What are pixels? (1 mark)
    (b) What role do pixels play in screen display? (1 mark)

44. List three possible factors that you would consider when buying a computer monitor. (3 marks)

45. (a) What are Character printers? (1 mark)
    (b) Give two examples of character printers. (2 marks)

46. State any four differences between Printer output and Monitor output. (4 marks)

47. Distinguish between Impact and Non-impact printers, and give two examples of each. (3 marks)

48. (a) State two advantages and one disadvantage of: (6 marks)

    i) Laser printers.
    ii) Inkjet printers.

    (b) Distinguish between a Line printer and a Page printer. (2 marks)

49. List three differences between a laser printer and a dot matrix printer. (3 marks)

50. (a) State two advantages of using a Printer for output. (2 marks)
    (b) Highlight four factors one should consider when purchasing a printer. (4 marks)

51. (a) Name two types of Plotters. (1 mark)
    (b) State the main difference between the plotters you have named in (a) above. (2 marks)
    (c) List three advantages of a Plotter over normal printer machines. (3 marks)

52. Give two advantages of using sound output devices. (2 marks)

53. George connected new multimedia speakers to his computer and tried to play his favourite music CD, but no sound came out. Suggest two problems that might have occurred.
(2 marks)

54. Give one device which can perform both input and output functions in a computer.
(1 mark)

55. (a) Define the following terms: (3 marks)

i) Port.
ii) Data interface cable.
iii) Power cable.

(b) State the function of the Power supply unit found in the System unit. (1 mark)

56. (a) Name any *two* peripheral devices that are connected to the computer through the PS/2 port.
(1 mark)

(b) Give two major advantages of a USB interface cable over other cables in the computer.
(2 marks)

(c) Explain two differences between Serial (COM) and Parallel (LPT) communication ports of a computer.
(2 marks)

57. In relation to cabling, give two reasons why a printer may not print work sent from the computer as expected?
(2 marks)

58. (a) With reasons, briefly describe the most appropriate type of printer or output device for the output of:
(6 marks)

i) Customer invoices on multiparty stationery.
ii) Letters to customers.
iii) Detailed engineering designs.

(b) Give three reasons why Optical disks are better storage devices compared to floppy disks.
(3 marks)

59. Outline *three* precautions one should take when assembling a computer. (3 marks)

60. (a) Define computer Software. (2 marks)

(b) Discuss the purpose and use of the following software found in microcomputers:

i) System software. (8 marks)
ii) Application software. (7 marks)

(c) You have been asked by a local secondary school to assist them in selecting a microcomputer for their use. Discuss five hardware and five software factors you would consider in order to select the most suitable computer system. (10 marks)

61. (a). What is a utility software? (1 mark)
(b). Give four examples of utility software. (2 marks)

62. Give two reasons why people prefer in-house developed application programs to general-purpose application packages. (2 marks)

63. (a) Why is it important to carefully study a warranty before committing yourself by signing it? (1 mark)

(b) Give three reasons why one might purchase a computer with a one year warranty instead of a three year warranty. (3 marks)

64. (a) What is a Standard software? (1 mark)

(b) Name five advantages and five disadvantages of off-the-shelf packages. (10 marks)

(c) Discuss four factors you would consider when purchasing an Application package. (4 marks)

65. Differentiate between single-purpose programs and integrated software. (2 marks)

66. (a) A firm intends to purchase new software. List three items that should accompany the software. (3 marks)

(b) When buying a new software product, usually an installation guide is needed by the buyer. State one reason for this. (1 mark)

67. State any two sources of an accounting application software for an organization. (2 marks)

68. Describe the following categories of software: (2 marks)

(i). Firmware.

(ii). Proprietary software.

69. (a) Explain the following software terms: (3 marks)

(i) Authenticity.

(ii) Portability.

(iii) Modularity.

(b) What is meant by the term User-friendly as used in software development? (1 mark)

70. Write the following acronyms in full: (3 marks)

(i) BIOS

(ii) EPROM

(iii) WAP

71. Briefly state the need for: (2 marks)

(i). Software maintenance.

(ii). Software updates.

72. A school bought a computer system. The hardware items supplied include: a 800 MHz processor, 640 MB of RAM, a sound card, speakers, a monitor, a keyboard, a 120 GB hard disk, a floppy disk drive, a CD -Read/Write drive, a mouse, a modem, an inkjet printer, and a joystick.

The software supplied include: an operating system, a BASIC interpreter, and the following packages: spreadsheets, graphics, word processor, art, database and games.

76. List three input devices from the given specifications. (3 marks)