

## **PAST QUESTIONS AND SUGGESTED ANSWERS**2007

1. Another name for microcomputer is .....**personal Computer, desktop computer**
2. The keys Ctrl + Alt + Del are used to perform .....**warm booting, Task manager, restart**
3. In MS word the icon ..... is used for .....**Spelling and grammar**
4. The numeric pads of the computer keyboard is similar to the .....**calculator**
5. Computers are classified by purpose, by size/capacity and by .....**type/nature**
6. The largest and most powerful computer is the .....**supercomputer**
7. The raw material form producing information is called the .....**data**
8. The physical components of the computer is called the .....**hardware**

**Indicate as T (true) or F(false) in the space provided**

9. Application software is part of the system software loaded on the PC. ....**false**
10. The analog computer solves problem by counting precisely .....**false**
11. The mainframe computer is larger than the minicomputer .....**true**
12. Microsoft Word is an example of Application Software .....**true**
13. The icon is used for comparing two documents .....**false**
14. Unauthorised access is the use of computer without permission .....**true**
15. Hardware theft is stealing the computer hardware .....**true**
16. Good passwords are those that are obvious or easy to guess .....**false**

**Matching the following (write the correct letter in the space provided)**

**A. Laptop B. Ms Word C. Ms Windows D. Analog Computer**

17. System Software .....**C**
18. Software for Typing .....**B**
19. A portable computer .....**D**
20. Speedometer .....**D**

### **Section B**

1. What is a computer? Why is it important to the trained teacher?
2. Write down the steps you would follow to create a folder on the desktop.
3. What is a computer Virus? What is the best way to prevent viruses from infecting your computer files?
4. What are computers so powerful?

## **Section B**

1. A computer is a device made up of a combination of electronic and electromechanical (partial electronic and partial mechanical) that operates under the control of instructions it is currently storing and has the capability to perform the following activities:
  - i. Accept data
  - ii. Processes the accepted data
  - iii. Produces an output of the data
  - iv. Can store the accepted data for future use
  - v. Can send the output to another device

### **Alternative**

A computer is an electronic machine that can be programmed to accept data (input), process it into useful information (output), store it (into secondary storage device) for safekeeping or later reuse and when necessary send the output to another device (communication). The processing is directed by software and performed by the hardware.

2. Computers are used in schools for many applications such as writing papers or searching the internet for information. Computer skills are also a subject being specifically taught in many schools, especially from puberty onward-when the ability to abstract forms. They are also a very useful part of the education system in terms of teaching and learning. It has created a revolution in education and therefore the trained teacher need to be computer literate in order to function professionally.

Right-click on the desktop (not on any icon)

Highlight the New on the menu; a submenu should appear immediately

Click (select) folder

The folder has its default name “new folder” highlighted

Simply type the desired name and press enter on the keyboard

3. A virus is a piece of program code inserted into another program to cause some event to occur that would not be normal or desirable. The virus becomes active when its code is executed by the computer. Usually the person or organisation that provides the files is unaware that it contains a virus

### **Alternative definition**

A virus, the most common type, is a computer program developed with the intent to replicate and pass itself undetected to multiple computers.

The best way to prevent viruses from infecting your computer files is to ensure that you have adequate virus-protection software installed on your computer. Since new viruses are constantly being discovered, you must keep both your anti-virus software package and your virus definitions up to date and scan your hard drive regularly.

- Make regular backups
- Scan all floppy disks before use
- Download from trusted web sites
- Beware of email attachment-scan them first
- Delete junk email-don't forward chain email

4. Computers are considered as a powerful devices or a super machine capable of doing an uncountable number of tasks. The power is derive from the following characteristics such as storage, reliability, consistency, speed, accuracy and ability to communicate. The power of the computer is therefore derived from their capability of processing and communicating information at high speed, with unquestionable reliability, higher accuracy and greater consistency and also enormous amount of storage capacity.

## **FEBRUARY, 2007 REGULAR**


### **SECTIONA**

#### **Fill in the blanks**

1. The three types of computers are the analog.....**digital...**and...**hybrid...** computers.
2. Which computer unit performs arithmetic, logical operation.....**ALU**.....
3. In word the icon **B** is used for .....**Bolding text**.....
4. What is the computer speed measurement unit called.....**Hertz**.....
5. What device or devices in a computer is volatile?.....**RAM**.....
6. The three standard peripherals of a computer system are .....**monitor, keyboard and Mouse**...
7. Pointer used to identify where the data will be next entered is .....**cursor**.....
8. What do the acronym GUI stands for?.....**Graphical User Interface**.....

#### **Indicate as T for (true) or F for (false) in the space provided**

9. A fastest computer ever designed to meet the computing needs is the mainframe.....**F**

10. The amount of space necessary to store one character is one bit.....**F**
11. The memory is permanent and storage is temporary.....**F**
12. The clipboard allows you to copy text.....**T**
13. The  icon is used for centering text.....**T**
14. the most commonly used auxiliary storage is the magnetic tape.....**F**
15. In data representation eight bit is equivalent to one bite.....**F**
16. The safest choice for password is a dictionary word.....**F**

**From the following list (Write the correct example in the space provided**

Personal computer, MS Word, Thermometer, MS Windows

17. Analog computer .....**Thermometer**
18. System Software .....**MS Windows**
19. Microcomputer .....**Personal computer**
20. Application Software .....**MS Word**

## **SECTION B**

***1. How do I start MS Word if there is no icon on the computer? List the steps.***

**Answer:**

1. Click on ***Start*** on the task bar.
2. Select ***All Programs***
3. Select ***Microsoft Office***.
4. Click on ***Microsoft Office Word***.

**2. Define the following terms (i) System Software (ii) Application Software. Give 2 examples each.**

**Answer:**

(i) System software is a set of programs that manages, control, coordinate the resources of the computer. Examples; Operating system, Language translators, Device drivers, Utilities

(ii) Application software is software or programs designed to help/assist users to perform specific task. Examples; Ms Word, Ms Excel, Coral draw, games, Power point etc.

**3. What is a backup in computing? When is backup used? How would you protect your data on the floppy diskette from being accidentally erased?**

**Answer:**

A backup in computing is a duplicate of files, data, and any other vital information on external storage device kept away from the computer system.

Backup is used when the original files, data and other vital information on the computer system is lost or damaged.

Since data is stored using magnetic spot, the floppy disk must be kept away from extreme heat and other demagnetizing process.

**4. List four (4) characteristics of the hard disk and four (4) of the floppy disk.**

**Answer:**

**Characteristics of the Hard disk**

1. Hard disk consists of metallic rather than plastic patterns.
2. The platters spin continuously.
3. Uses the cylinder method for storing data.
4. They are tightly sealed to prevent any foreign matter from getting inside.

5. The access time depends on three factors; seek time, rotational, and data transfer.

### **Characteristics of the Floppy disk**

1. Floppy disk is a flat, circular piece of mylar plastics.
2. Data and information can be stored on a metal-oxide film coating the mylar plastics.
3. Uses the sector method for storing data.
4. It has a total capacity of 1.44 megabytes.
5. The diskette is divided into rings called tracks.
6. The floppy disk drives do not spin continuously.
7. It can be write-protected.

### **SECTION B (Short Answer Questions)**

#### **15 Marks Each**

*1. What is the purpose of input devices, output devices and storage devices? Explain with example using at least 3 unique sentences.*

#### **Answer:**

Input devices are devices used to feed/send data into the computer. Example; Mouse and keyboard

Output devices are devices used to format data to be displayed or printed. Example; Monitor, printer.

Storage devices are devices used to store data or information for future use. Example; compact disk and hard disk

*2. A character is represented on the computer as 10110111. What is this value in decimal?*

#### **Answer:**

#### **Assignment:**

*3. Explain clearly the meaning of the following terms used in word processing, insert text, deleting text, cut and paste, copy text and word wrap.*

#### **Answer:**

***Insert text*** is used to insert text anywhere in the document.

***Delete text*** allows you to erase characters, words, lines, or pages as easily as you can cross them out

***Cut and paste*** allows you to remove (cut) a section of text from one place in a document and insert (paste) it somewhere else.

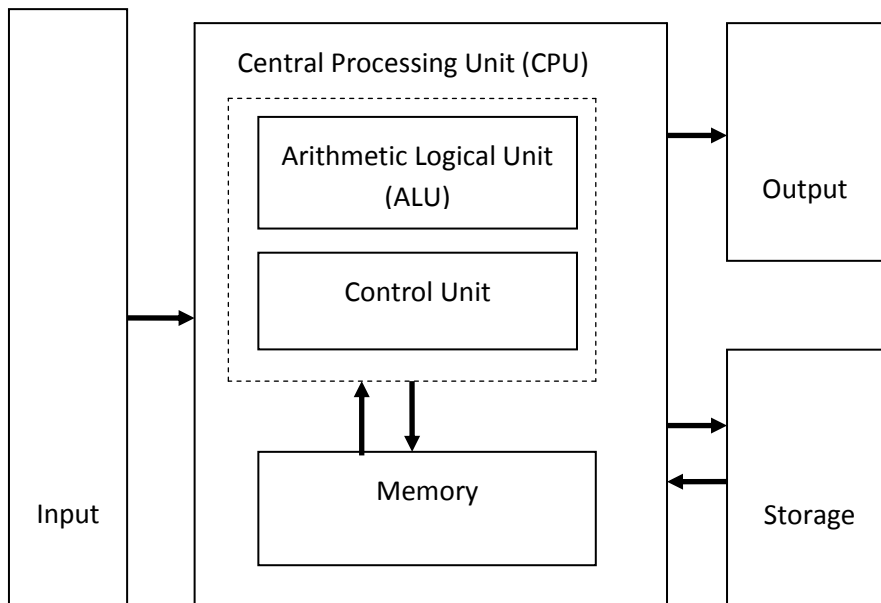
***Copy*** allows you to duplicate a section of text.

***Word wrap*** enables the word processor automatically moves the cursor or insertion point to the next line when you filled one line with text, and it will readjust text if you change the margins.

***4. The diagram below represent the component of the computer which include the Input device, the output device, the control unit, the ALU, the memory and the storage device and the flow of data between the various components. Label them appropriately. What is the purpose of the ALU?***

**Answer:**

(i)



(ii) The ALU performs arithmetic and logical operations during data processing.

2009

1. The ASCII code is used to represent ..... on the computer.
2. To transfer a photograph to your computer you will need a.....
3. Bill Gate is the brain behind the software company called.....
4. Beside the keyboard the most common input device is the....
5. The latest operation system used on PC is.....
6. The acronym CLI stands for .....

7. Another name for the monitor is the .....
8. The speed of modern PC like Pentium IV are measured in.....
9. An example of browser is.....
10. The abbreviation PROM stands .....

***CIRCLE OR TICK AS F(FALSE) OR T(TRUE)***

11. The computer can perform arithmetic operation only. True or False.
12. When the power is off the content of the floppy disk is lost. True or false.
13. MS Windows is the first to be loaded when the computer is first put on. True or False.
14. The capacity of the normal floppy drive is 1.44 bytes. True or False.
15. The esc key on the keyboard is located at top left corner. True or False.
16. CDROM is an example of magnetic disk. True or False.
17. 1000 bit is equivalent to 1 kilo byte. True or False.
18. A computer virus is designed intentionally to cause annoyance or damage. True or False.
19. The BIOS does manage the keyboard. True or False.
20. Ms Windows package include only Internet Explorer. True or False.

***SECTION B***

1. Describe the following viruses and example how they work (i) Boot sector virus (ii) worm?
2. A character is represented on the computer as 01011010. What is this value in the decimals?
3. Draw a diagram illustrating the relationship between the CPU (and its component and the input and output devices)?
4. Write short notes on the computer - based training and the web – based training.

**SOLUTION**

1. Data / information, 2. Scanner/digital camera, 3. Microsoft, 4. Mouse, 5. Windows Vista/Mac OS/Linux 9.0, 6. Command Line Interface, 7. Visual Display Unit, 8. Gigahertz, 9. Internet explorer, Netscape, Mozilla fire fox, 10. Programmable Read Only Memory
11. False, 12. False, 13. True, 14. False, 15. True, 16. False, 17. False, 18. True, 19. True, 20. False

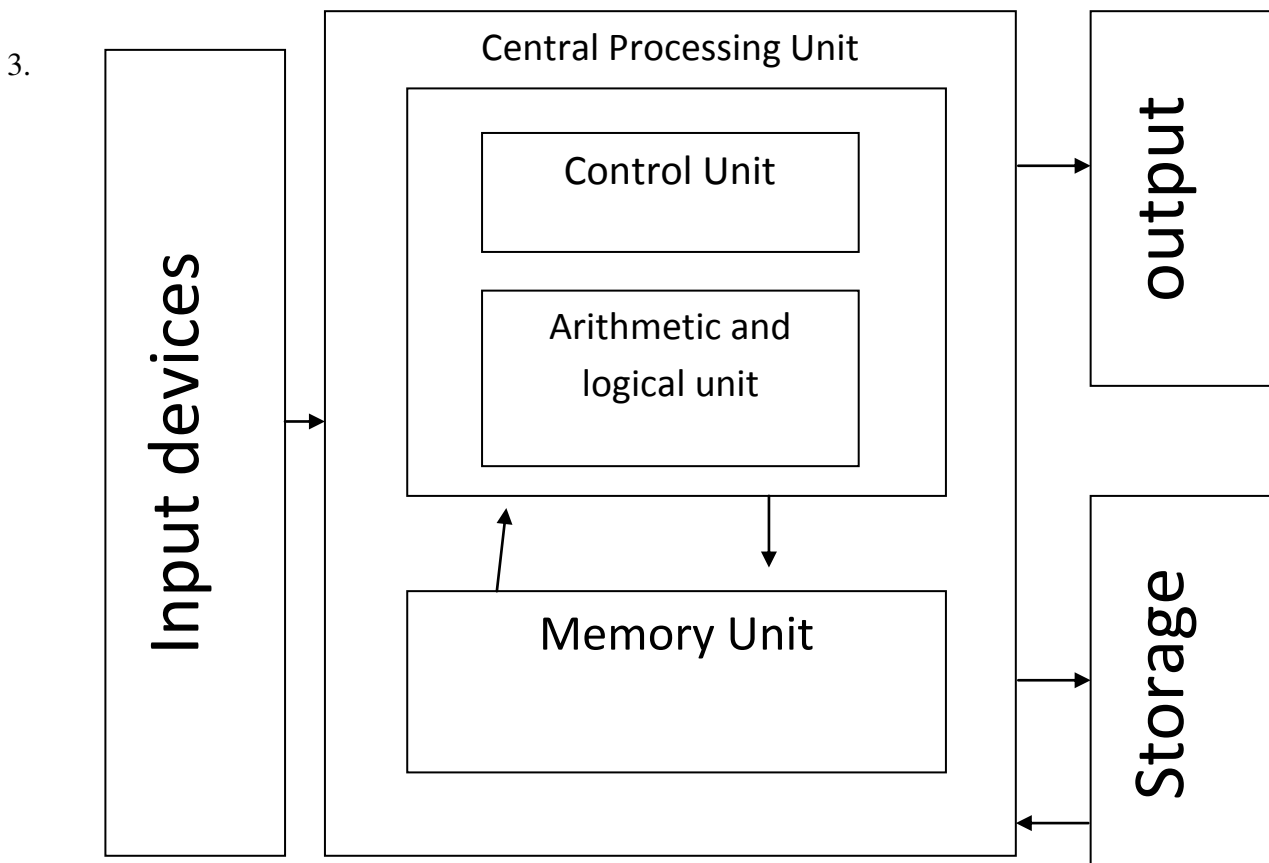


## SECTION B

1. A boot sector virus infects the boot sector of a hard disk or floppy disk. A boot sector is a special area of the disk that stores essential files the computer access during startup. The virus moves from the boot sector to a different area and when the computer is started; it then copies itself unto the memory it then affect other disk. It allows the actual boot sector to be read as though a normal startup.

A worm is a program whose purpose is to duplicate itself. An effective worm will fill an entire disk with copies of itself and it can spread to multiple computers on a network essentially clogging the entire system with copies. They are commonly spread over the internet via emails messages, attachment and internet relay chat.

$$\begin{aligned} 2. \quad &= (0 \cdot 2^7) + (1 \cdot 2^6) + (0 \cdot 2^5) + (1 \cdot 2^4) + (1 \cdot 2^3) + (0 \cdot 2^2) + (1 \cdot 2^1) + (0 \cdot 2^0) \\ &= (0 \cdot 128) + (1 \cdot 64) + (0 \cdot 32) + (1 \cdot 16) + (1 \cdot 8) + (0 \cdot 4) + (1 \cdot 2) + (0 \cdot 1) \\ &= 0 + 64 + 0 + 16 + 0 + 8 + 2 + 0 \\ &= 90 \end{aligned}$$



4. CBT is an interactive instructional approach in which the computer provides a series of stimuli to the student ranging from questions to be answered to choices or decision to be made. The CBT then provides

feedback on the student's response. It is the use of the computer as a teaching machine to deliver instruction.

WBT is a form of computer-based training in which the training material resides on the web pages accessible through the World Wide Web. Typical media elements used are text and graphics including animation, audio and video. Some WBT require a lot of bandwidth.

### **JANUARY 2009 (REGULAR)**

#### **Fill in the blanks**

1. The icon found at the bottom left corner of the desktop of a PC is called.....**Start button**.
2. Clicking the mouse very quickly but three times is called ....**Triple click**...
4. The PC market is divided broadly into two, IBM compatible and .....**Apple Mac/Intel**....
5. The medium version of mainframe computer is the ....**minicomputer**....
6. What is the meaning of the acronym EPROM.....**Erasable Programmable Read Only Memory**.
7. The security of a computer assets and capital equipment is called. **PC hardware security**
8. The box that houses the PC hardware and other components is called...**System unit**....
9. Cables connecting input and output devices to .....**Ports**.....
10. USB stands for ...**Universal Serial Bus**....

#### **Tick or circle T for (true) or F for (false)**

11	The fan is responsible for the noise when the PC runs.	<b>T</b>	
12	The microprocessor cannot become hoot due to processing.		<b>F</b>
13	Graphics co-processor is required for graphical packages.		<b>F</b>
14	There are two types of keyboard called QWERTY and DVOKA		<b>F</b>
15	Ant-virus software varies in terms of performance.	<b>T</b>	

16	A typical clock speed is 1.0 GHz.	<b>T</b>	
17	A character is represented by 1 bites.		<b>F</b>
18	EBCDIC is used in data representation and not ASCII		<b>F</b>
19	Hard disks access information much faster that Floppy disks.	<b>T</b>	
20	Disk access time depends on the type of storage device.	<b>T</b>	

### **SECTION B (Short Answer Questions)**

#### **15 Marks Each**

***1. A computer is infected with virus in your School. (a) Explain why this happened and how to prevent that in future. (b) Name 2 antivirus software you know.***

#### **Answer:**

- (a) 1. Active and updated antivirus was not installed on the computer.
2. Infected external storage devices such as pen drive, floppy disk, compact disk etc were inserted into the computer.
3. Files infected with virus were copied and used on the computer.
4. The computer was not scanned regularly.

#### ***How to prevent virus infection in the future***

1. Active antivirus must installed on the computer and updated regularly.
2. The computer system must be scanned every day.
3. External storage devices must be scanned before using them on the computer.
4. Treat all storage devices as though they are infected with virus.

**Examples of antivirus;** Panda, Avast, Rising, MacAfee, Avira, Norton etc

2. (a) A character is represented on the computer as 10100000. What is this value in decimals?

(b) If 0110001 represents the lower case letter 'a'. What will represent lower case letter 'd'?

**Answer:**

$$\begin{aligned}(a) 10100000 &= 1*2^7 + 0*2^6 + 1*2^5 + 0*2^4 + 0*2^3 + 0*2^2 + 0*2^1 + 0*2^0 \\&= 1*128 + 0*64 + 1*32 + 0*16 + 0*8 + 0*4 + 0*2 + 0*1 \\&= 128 + 0 + 32 + 0 + 0 + 0 + 0 + 0 \\&= 128 + 32 \\&= 160\end{aligned}$$

(b) If 0110001 represents the lower case letter 'a'. What will represent lower case letter 'd'?

**Answer:**

$$01100001 + 1 = 01100010 = b$$

$$01100010 + 1 = 01100011 = c$$

$$01100011 + 1 = 01100100 = d$$

3. (a) List 5 sources of information and 5 tools for sending and receiving information.

(b) What tools enable the information processing activities to be carried out completely?

**Answer:**

(a) Sources of information are; News, News papers, letters, music, Books, magazines, Internet, teaching, announcement, films/movies, People.

Tools for sending and receiving information are; Television, Radio, Mobile phones, microphone, computers etc.

<b><u>(b) Input tools</u></b>	<b><u>Processing tools</u></b>	<b><u>Output tools</u></b>	<b><u>Storage tools</u></b>
Keyboard	CPU	Monitor	Hard disk
Mouse		Printer	Floppy disk

**4. What is meant by the following as used in power point presentation?**

**Answer:**

**Auto content wizard** formats a basic slide set by leading you through some basic questions.

Design template means choose a pre-designed layout.

Blank presentation means designing presentation from scratch.

**(b) How would you start a new presentation?**

1. Click on start on the task bar.
2. Select All Programs.
3. Click on Microsoft Office.
4. Select Microsoft Office Power Point.

**UTDBE 2008/2009**

1. The acronym ASCII stands for.....
2. The cursor or point on a monitor is controlled by movement of the .....
3. The system unit is connected to the printer with a cable called the .....
4. The output device that is used every time the PC is on is the .....
5. An example of an operating system used on PC is .....
6. The acronym GUI stands for .....
7. Another name for the system board is the .....
8. The speed of the processor is measured in.....
9. To view web pages you will need a software called .....
10. The abbreviation WYSIWYG stands for .....

***TICK OR CIRCLE AS T(TRUE) OR F(FALSE) ON THE TABLE PROVIDED***

11. Decision – making operation cannot be performed by the computer .
12. When the power is off the content of the ROM is lost. True or False.
13. The capacity of the hard drive and the floppy drive are the same.
14. An example of optical disk is the CDROM. True or False
15. 8-bit is equivalent to 1 bite . True or false .

16. The QWERTY keyboard is the most common today. True or False.
17. A computer virus is not a program. True or false
18. MS Word is the first to loaded when the computer is first put on .
19. The BIOS does not manage the keyboard. True or False
20. MS Office package include only MS Words and MS Excel. True or False.

### **SECTION B**

1. What is analog data transmission? How is it difference from Digital data transmission?  
What is the use of a modem in data communication
2. A data is represented in binary as 101010.what is the decimals value?
3. Write a short note on the RAM and ROM. List three(3) example of ROM.
4. The machine cycle consist of the following step: fetch, decode, execute and store . Explain these term as clearly as you can.

*GOOD LUCK !!!!!!!!!!!!!!!*

### **SOLUTION**

1. **Analog data** transmission is the passage of data in a continuous wave form. The telephone system is based on analog transmission.

**The digital** transmission is the passage of data using distinct on and off electrical state and therefore represented by ZEROs (0s) and ONES (1s). the computer understands and uses digital data.

**Modem** stands for modulation and demodulation.

$$\begin{aligned}
 2. \quad &= (1 \cdot 2^7) + (0 \cdot 2^6) + (1 \cdot 2^5) + (0 \cdot 2^4) + (1 \cdot 2^3) + (0 \cdot 2^2) + (1 \cdot 2^1) + (0 \cdot 2^0) \\
 &= (1 \cdot 128) + (1 \cdot 32) + (0 \cdot 16) + (1 \cdot 8) + (0 \cdot 4) + (1 \cdot 2) + (0 \cdot 1) \\
 &= 128 + 0 + 32 + 0 + 8 + 0 + 2 + 0 \\
 &= 170
 \end{aligned}$$

3. **RAM** stands for Random Access Memory/main memory/primary memory

Ram is memory chips that can be read from and written to by processor. Most RAM is memory is volatile; data in RAM is lost when computer's power is turned off.

**ROM** stands for Read Only Memory. Memory chips that store permanent data and instructions. Read Only. It is a non-volatile memory; it is not lost when computer's power is turned off. Example are PROM, EPROM, EEPROM and device firmware chip etc.

4. The machine cycle is a series similar general steps performed by all CPUs


**Fetch**-the program's binary code is "fetched" from its temporary location in RAM and moved to the CPU.

**Decode**-the program's binary code is decoded into commands the CPU Understands.

**Execute**-the ALU performs the calculations.

**Store** – the results are stored in the registers

## 2009

1. Computers are classified by purpose as general purpose and ...s **pecial purpose**
2. There are 2 types of PCs found on the market, Apple Mac and **IBM Compatible/IBM Clone**
3. The abbreviation PDA stands for ..... **Personal Digital Assistant**
4. Computers that solve problems by counting precisely are called ... **Digital Computer**
5. The illegal copying or use of program is called ... **Software Piracy/Software theft**
6. Unsolicited or unwanted email is known as ... **Spam/Junk mail**
7. Secret code that allows you access to a computer system or program is .....**Password**
8. The Ms Office software used for student's assessment is called .....**Excel/Access**
9. Software that helps users to perform their routine task is called...**Application/productivity software**
10. In Microsoft Word the icon  is used to ...**Copy a text to the clipboard**
11. The 2 main types of software are system software and operating software .....**False**
12. Viruses cannot be passed to another computer through a network .....**False**
13. Taking a Backup is NOT a security control measure .....**False**
14. Spreadsheet is composed of 100 rows and 100 columns .....**False**
15. The application software coordinator of all hardware components.....**False**
16. It is possible to minimize all program windows when using MS Office .....**True**
17. Anti-virus software prevents people from developing viruses .....**False**
18. Software are the non-physical component of the computer .....**True**
19. Ms Word cannot create newsletter-style column .....**False**
20. Ms Word cannot create chart ..... **False..**

## SECTION B

1. What are advantages and the disadvantages of using application software?
2. Why are computers so powerful? Explain.
3. Explain why a trainer teacher like you should be computer literate?
4. Explain the following terminologies used in MS Word.

Page size and margins, search and replace, delete text, cut and paste, insert text.

## SECTION B

### Advantages of using application software package

1. Quickly installed hence can be used as soon as it is purchased.
2. Have well-defined function because they have been examined / used by many people.
3. It is cheaper due to mass-production.
4. Easily updated and revised.
5. Well documented / easy documentation

### Disadvantages

1. The purchaser has no direct control over the package unlike in-house software
2. Not ideal for a particular customer
3. Errors can come in
4. Computers are considered as a powerful devices or a super machine capable of doing an uncountable number of tasks. The power is derive from the following characteristics such as *storage, reliability, consistency, speed, accuracy and ability to communicate. The power of the computer is therefore derived from their capability of processing and communicating* information at high speed, with unquestionable reliability, higher accuracy and greater consistency and also enormous amount of storage capacity.
5. Computers are used in schools for many applications such as writing papers or searching the internet for information.

Computer skills are also a subject being specifically taught in many schools. Where they are widespread, they are also a very useful part of the education system in terms of teaching and learning.

It has created a revolution in education and therefore the trained teacher need to be computer literate in other to function professionally.

6. **Page size and margins:** Allows you to define various page sizes and margins and the word processor will automatically readjust the text so that it fits.

**Search and replace:** Allows you to direct the word processor to search for a particular word or phrase. You can also direct the word processor to replace one group of characters with another everywhere that the first group appears.

**Delete text:** Allows you to erase characters, words, lines or pages as easily as you can cross them out on paper.

**Cut and paste:** Allows you to remove (cut) a section of text from one place in a document and insert (paste) it somewhere else.

**Insert text:** Allows you to insert text anywhere in the document.



## **JANUARY 2010 (REGULAR)**

### **SECTION A (2 marks each)**

#### **Fill in the blanks**

1. Hardware may be defined as the .....**physical** ...part of the computer.
2. The instruction that controls the operation of a computer system is called.....**Software**.
3. The process of writing or coding programs is termed as .....**programming**.
4. the software that controls the hardware is called.....**Operating system**
5. the 2 user interface are GUI and .....**command line interface (CLI)**
6. Software used for solving real world problems are called.....**application/productivity software**
7. Word processing creates, edit, and .....**store/save/print documents**
8. Adding more RAM have big effect on the system.....**performance/speed**
9. OS that permit many concurrent users are called..... **multi-user operating system**
10. The smallest unit of measurement on the computer is called.....**bit**

#### **Tick or circle T for (true) or F for (false)**

11	Flash memories are volatile RAM.		<b>F</b>
12	The Open source software is a variation of freeware.	<b>T</b>	
13	Off-the-shelf software is another name for in-house software.		<b>F</b>
<b>14</b>	The fan is designed to blow when too much power is supply into it.	<b>T</b>	
15	Parallel ports are used to connect mouse and keyboard.		<b>F</b>
16	Magnetic disk is used for direct access to data.	<b>T</b>	
17	32-bits is equivalent to 4 bytes of information.	<b>T</b>	
18	Both EBCDIC and ASCII are all 8-bits code each.	<b>T</b>	

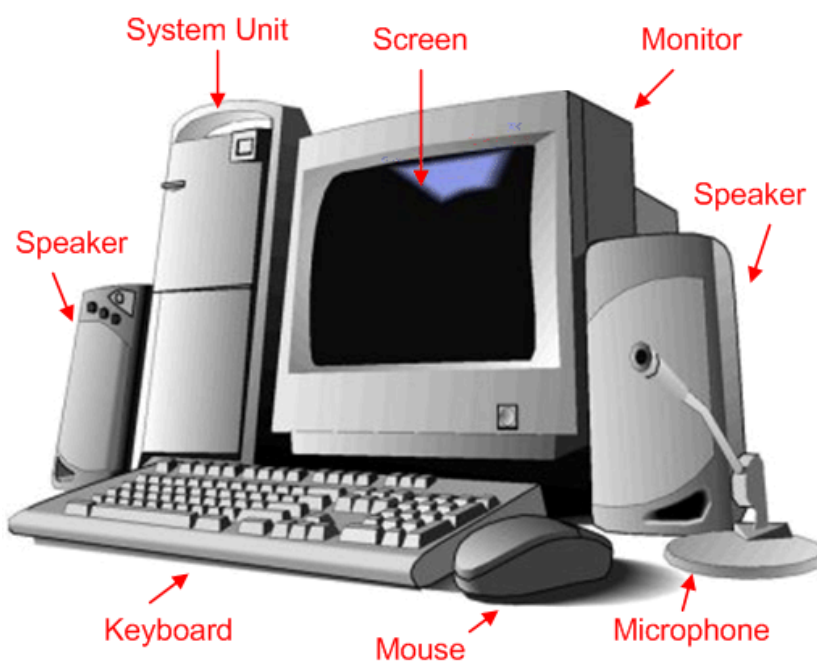
19	One gigabyte is exactly 1 billion bytes.		<b>F</b>
20	Every personal computer has a hard disk.	<b>T</b>	

### **SECTION B (Short Answer Questions)**

#### **15 Marks Each.**

***1. Label clearly the following diagram.***

**Answer:**



***2. The information processing cycle consists of (a) Input (b) Processing (c) Output and (d) Storage activities. Describe briefly these activities in the space provided.***

**Answer:**

Input is the process of entering/sending data into main memory of the computer.

Processing is the process of converting/transforming data into information.

Output is the process of formatting the data to be displayed or printed.

Storage is the process of keeping data or information saves for future use.

**3. (a) A character is represented on the computer as 10100000. What is this value in decimals?**

**(b) How many bits will the following occupy on a magnetic medium like a floppy disk? KOMENDA OF EDUCATION**

**Answer:**

(a) Assignment.

(b) KOMENDA = 7 characters      KOMENDA = 7 characters      OF = 2 characters      EDUCATION = 9 characters but these words are separated by three (3) spaces which is = 3 characters.

Total number of characters = 7 + 7+ 2 + 9 +3 = 28 characters. Since 1 character = 1 byte

Total number of bits = 28\*8 =224 bits.

**4. Computers can be classified by purpose as general purpose and special purpose computers.**

***Explain these terms with an example in each case.***

**Answer:**

General purpose computers are computers designed to solve a wide range of problems e.g. Desktop computer.

Special purpose computers are computers designed to perform specific or restricted number of task e.g. ATM, e-zwich, counting machine, traffic light etc.

storing data/information externally, i.e. for making backups.

**2010**

- 1 . All software communicates with user through the user..... Interface**
- 2. DOS stands for ..... Disk Operating System**
- 3. Multitasking ..... Refer to the ability to work on several tasks concurrently.**
- 4. OS that permit many concurrent user are called..... Multi –user operating system.**

- 5 A computer word is a group of bit treated as a single entity by the ..... **Control unit**
6. The control unit and ALU are component of the..... **Processor/CPU.**
7. High speed memories used by the processor are called ..... **Registers**
8. A bus is a common electrical pathway between the various component of the ... **Personal computer**
9. Bit is an acronym from ..... **digital computer.**
10. The type of computer that is used at the office is known as ..... **digital computer.**

**INDICATE AS T (TRUE) OR F (FALSE) IN THE SPACE PROVIDED.**

11. The operating system is not part of the system software..... **False**
12. System software serves the need of the user..... **False**
13. MS Word is an example of system software.....**False**
14. Hard disks usually have bigger storage capacity than floppy disk.....**True**
15. Accessing information from floppy disk is faster than hard disk.....**False**
16. One type of system is the Mac OS..... **True**
17. ASCII coding scheme are by all main frame.....**False**
18. Unicode is an 8- bit code.....**False**
19. 8 – bit can represent 200 characters. Number , and special characters.-.....**False**
20. The name Institute of Education can be represent by 20 bytes .....**False**

**SECTION B**

1. Data can be numeric or non- numeric (character data) .In the tabular form below, differentiate (give two (2) differences only ) between Numeric data and character data .start with an example in each case and then provide two (2) difference.
2. Every operating system perform three(3) function :managing resource , providing a user interface ,and running applications. Explains these as clearly as you can .
3. A character is represented on the computer as 10110110. What is the value in decimals.

4. What is port? Describe the role of the parallel port and the Universal serial port.

GOOD LUCK!!!!!!!!!!!!!!!

### Section b

1.

Numeric data	Non-numeric (character data)
An example is 123	An example is Mensah
It is used to represent only numbers	It is used to represent letters, symbol
They might be used in arithmetic operations	They are not used in arithmetic operations
They are stored on the computer in binary	They are stored in the computer in the form of an encoding scheme
It is used in quantitative analysis	It is used for qualitative analysis

2.

**Managing resources:** These programs coordinate the entire computer's resource including keyboard, mouse, printer, monitor, storage devices, memory, etc

**Providing user interface:** This enables user to interact with applications software and hardware. Almost all operating systems today provide a windows-like graphical user interface (GUI) in which icons are used to represent features.

**Running Applications:** These programs load and run applications. Most operating system have ability to run more than one application at a time. Thus, multi-tasking. The most common operating system for microcomputers is windows, mac os, unix

3.

$$\begin{aligned} &= (1*2^7) + (0*2^6) + (1*2^5) + (1*2^4) + (0*2^3) + (1*2^2) + (1*2^1) + (0*2^0) \\ &= (1*128) + (0*64) + (1*32) + (1*16) + (0*8) + (1*4) + (1*2) + (0*1) \\ &= 128 + 0 + 32 + 16 + 0 + 4 + 2 + 0 \\ &= 182 \end{aligned}$$

4.

A **port** is a connecting socket on the outside of the system unit. Some ports like mouse and keyboard ports are for specific devices.

**Parallel ports** are used to connect external devices that need to send or receive a lot of data over a short distance. These ports typically send eight bits of data simultaneously across eight parallel wires. Parallel ports are mostly used to connect printers to the system unit.

**Universal serial bus (USB)** ports are expected to gradually replace serial and parallel ports. They are faster and one USB port can be used to connect about 127 devices such as mice, modem, keyboard etc to the system unit.

### ***UTDBE 2010***

#### ***FILL IN THE BLANKS***

1. The ASCII code is used to represent data / information in the ..... **Computer**
2. The device that help that help user to scan drawing to the computer is the ..... **Scanner**
3. The founder of Microsoft Corporation is ..... **Bill Gate**
4. Beside the keyboard and the mouse, another input device is the... **Microphone / scanner, digital camera, lightpen, etc**
5. The latest operation system after Windows Vista is..... **Windows 7**
6. User Inter face for computer are either CLI or..... **GUI**
7. Another name for the Visual Display Unit is..... **Monitor, CRT, LCD, VDT**
8. The speed of computer are measured in ..... **Gigahertz, megahertz, hertz,**
9. Beside Internet Explorer another browser is ..... **Netscape, Mozilla firefox, opera mini etc**
10. The abbreviation ROM stands for ..... **Read Only Memory**

#### ***CIRCLE OR TICK OR AS T(TRUE)OR F (FALSE) ON THE TABLE PROVIDED***

11. The computer can perform arithmetic and logical operation . **True or False.**
12. When the power is off the content of the flash disk is lost. **True or false**
13. When you load MS Windows , MS Office is load automatically. **True or False.**
14. The capacity of the floppy drive is greater than that of the pen drive. **True or False.**

15. The esc key on the keyboard is located near the shift key. **True or False.**
16. CD ROM is an example of compact disk. **True or False.**
17. 1000 bit is equivalent to kilo byte. **True or False.**
18. A computer virus is designed intentionally to cause annoyance or damage. **True**
19. The BIOS does not manage the keyboard. **True or False**
20. MS Windows package include Internet Explorer as a browser. **True**

### **SECTION B**

1. What is a (i) Boot sector virus (ii) worm.? How do they work?
2. A character is represent on the computer as 11011000. What is it's value in decimals?
3. Write a short notes on (i) Primary memory (ii) Secondary memory in the space provided.
4. Explain the terms (i) Computer- based training (ii) Web based training.

GOOD LUCK !!!

### **Section B**

1. A boot sector virus infects the boot sector of a hard disk or floppy disk. A boot sector is a special area of the disk that stores essential files the computer access during startup. The virus moves from the boot sector to a different area and when the computer is started; it then copies itself unto the memory it then affect other disk. It allows the actual boot sector to be read as though a normal startup.

A worm is a program whose purpose is to duplicate itself. An effective worm will fill an entire disk with copies of itself and it can spread to multiple computers on a network essentially clogging the entire system with copies. They are commonly spread over the internet via emails messages, attachment and internet relay chat.

$$\begin{aligned}
 2. \quad &= (1*2^7) + (1*2^6) + (0*2^5) + (1*2^4) + (1*2^3) + (0*2^2) + (0*2^1) + (0*2^0) \\
 &= (1*128) + (1*64) + (0*32) + (1*16) + (1*8) + (0*4) + (0*2) + (0*1) \\
 &= 128 + 64 + 0 + 16 + 8 + 0 + 0 + 0 \\
 &= 216
 \end{aligned}$$

3.


- i. The main Memory has 3 functions. It stores all or part of the programs being executed, it stores the operating system programs that manage the operating of the computer and holds data that are being used by the programs.
  - ii. Secondary memory is used to store information in a non-volatile state and to store volumes of data too large to fit into memory. Programs and data are stored here permanently and retrieved into memory and when required.
- 4.

**CBT** is an interactive instructional approach in which the computer provides a series of stimuli to the student ranging from questions to be answered to choices or decision to be made. The CBT then provides feedback on the student's response. It is the use of the computer as a teaching machine to deliver instruction.

**WBT** is a form of computer-based training in which the training material resides on the web pages accessible through the World Wide Web. Typical media elements used are text and graphics including animation, audio and video. Some WBT require a lot of bandwidth.

**APRIL/MAY 2010**

#### **SECTION A (FILL IN THE BLANKS)**

1. Computers are classified by purpose as special purpose computer and **General purpose computer**
2. There are two types of PCs found on the market , the **IBM compatible / IBM clone** and **Apple Mac**
3. The abbreviation PDA stands for .....**Personal Digital Assistant**
4. Computer that solve problems by counting precisely are called....**Digital Computer**.
5. Software Piracy refers to copying computer programs .....**Illegally** copied
6. Spam or Junk mail is also known as ..... **Unsolicited or unwanted email**
7. To prevent other user from accessing your computer system , you need a secret code called.  
**Password /Access code**
8. MS Office provide two programs that can be used for student 's assessment . List one **Excel/Access**.
9. To perform routine task you will need a software collectively called ...**Productivity Software**..
10. In Microsoft word the icon is used to  e ... **Clipboard or Buffer**

#### **INDICATE AS F(FALSE)OR T(TRUE) IN THE SPACE PROVIDED**

- |   |              |
|---|--------------|
| 11. The two main of types of software are utility software and operating software | <b>False</b> |
| 12. Viruses can be passed to computer through a network .....                     | <b>False</b> |
| 13. Copy and paste cannot be used in spreadsheet like MS Excel                    | <b>False</b> |



- |  |              |
|--|--------------|
| 14. Spreadsheet is composed of rows and columns.....                         | <b>True</b>  |
| 15. The application software coordinator of all hardware components .....    | <b>False</b> |
| 16. It is impossible to minimize all programs windows when using MS Office   | <b>False</b> |
| 17. Anti-virus software helps to protect files and program from viruses..... | <b>True</b>  |
| 18. Software are the non-physical component of the computer .....            | <b>True</b>  |
| 19. Ms Word cannot create newsletter – style column .....                    | <b>False</b> |
| 20. You can insert image in Ms Word document.....                            | <b>True</b>  |

## **SECTION B**

#

1. List five (5) advantage and two(2) disadvantage of application software likes Ms Office ?
2. What characteristics of the computer make it so powerful? Explain
3. Explain why computer literacy is so important in school?
4. List and explain five (5) terminologies used in word processing package like MS Word?

### **Section B**

1.

1. Quickly installed hence can be used as soon as it is purchased
2. Have well defined function because they have been examined / used by many people
3. It is cheaper due to mass production
4. Easily updated and revised
5. Because of the widespread usage, the time and cost of training are reduced greatly

#### **Disadvantages**

1. The purchaser has no direct control over the package unlike in-house software
2. Not ideal for a particular customer

2. The following characteristics such as **storage, reliability, consistency, speed, accuracy and ability to communicate make computer powerful**; the power of computer is derived from their capability of processing and communicating information at high speed, with unquestionable reliability, higher accuracy and greater consistency and also has enormous amount of storage capacity.

3. Computers are used for writing papers

- Computers are used for searching the internet for information
- Computer skills are specifically taught in many schools
- They are also a very useful for teaching and learning
- It has created a revolution in education and therefore the trained teacher need to be computer literate in order to function professionally

**4. Page size and margins:** Allows you to define various page sizes and margins, and the word processor will automatically readjust the text so that it fits.

**Search and replace:** Allows you to direct the word processor to search for a particular word or phrase. You can also direct the word processor to replace one group or characters with another everywhere that the first group appears.

**Delete text:** Allows you to erase characters, words, lines or pages as easily as you can cross them out on paper

**Cut and paste:** Allows you to remove(cut) a section of text from one place in a document and insert (paste) in somewhere else.

**Insert text:** Allows you to insert text(add) anywhere in the document

## **FEBRUARY, 2011**

### **SECTION A (2 marks each)**

#### **Fill in the blanks**

1. Software that teach particular skills are known as .....**Application software**.....
2. Program instructions can only be executed when in the ...**Run mode/ Execution mode**...
3. The electrical, electronic and mechanical components of the PC is called...**Hardware**.....
4. The information processing cycle consists of inputs, process, output and .....**storage**.....
5. The most popular mobile computer is the ..... **..Laptop**
6. Most computers are digital and recognizes 2 discrete states represented by **1 or 0** or **on/off**
7. The abbreviation PDA stands for .....**Personal Digital Assistant**.....
8. An example of storage media that stores information permanently is...**Hard disk/Floppy disk**
9. The BIOS executes a series of test when the computer is first put on called...**Power On Self Test**....
10. An example of Logical operation performed by the ALU is ...**Comparing/Ordering/Matching**....

#### **Tick or circle T (true) or F (false)**

11	Computer is part of our daily life and therefore vital to success	<b>T</b>	
12	The computer processes data into instruction		<b>F</b>
13	Data are the steps that tells the computer how to perform a particular task		<b>F</b>

14	The accuracy of the computer output depends on the accuracy of the input	<b>T</b>	
15	Workstation is used for extensive powerful calculations and graphics	<b>T</b>	
16	DVD and CD have the same capacity		<b>F</b>
17	The integrated circuit contains millions of capacitors	<b>T</b>	
18	EBCDIC is the only coding scheme use in data representation		<b>F</b>
19	An example of logical operation is addition		<b>F</b>
20	CBT consists of self-directed, self-paced instructions on a topic	<b>T</b>	

### **SECTION B (Answer all questions)**

***1. What is computer literacy? Why is it important to the trained teacher?***

#### **Answer**

(a) Computer literacy is the knowledge one has about computers and how to use computers to accomplish a given task efficiently. It is also involves how one understands how computers work.

(b) 1. Computer skills are taught as a subject in schools where the teacher trainee will be teaching.

2. Computer is used for research especially on the internet to support teaching and learning.

3. Computer is a tool for teaching and learning in the modern classroom.

4. Computer is used for keeping records in our schools.

5. Computer is used for mathematical computations and other calculation.

***3. Describe as best as you can the following MS Windows components and how they are used: (i) The Desktop, (ii) Taskbar and the (iii) Start Button***

#### **Answer:**

(i) Desktop is the system's main interface screen which displays the task bar, wall paper, icons, and provides quick access to programs and information.

(ii) The task bar is a horizontal bar found at the bottom from left to right of the desktop. The task bar contains the start button at the left Conner and system tray at the extreme right. The system tray consists of opened programs and other icons such as speaker, the clock at right most conner

(iii) The start button is found at the left Conner on the taskbar. The start button enables the user to start applications that have been installed on the computer. When one click on the start button, a menu appears that enable the user to choose or start programs.

**4. Computer storage media use two basic technologies in storing data-magnetic storage and optical storage. Write short notes on each in the space provided.**

**Answer:**

Magnetic storage comprises of the medium and device merged together as one unit or whole. It has device aspect which does the read or write of data or information. The magnetic storage deals with the number of disks in the unit called platters. Each disk (platter) has its own read or write head.

Optical storage media is a plastic disk on which information is stored, deleted, or changed using laser light according to the type. Optical storage includes Compact Disc (CD) and Digital Versatile Disc (DVD). Optical storage media is used for storing data/information

## **SECTION A**

**FILL THE IN THE BLANK.**

1. The program that is automatic loaded when the computer is put on is the ...**Operating System**
2. To find an alternative word to use in MS Word document , you would use the **Thesaurus**
3. To type a capital letter on the keyboard one can use the caps lock key or the ...**Shift Key**
4. The unauthorised duplication and /or use of computer software is known as **Software theft / piracy**
5. Computer security is a method of protecting data , programs , and ... **Computer system assets**
6. What is the meaning of the abbreviation BIOS.....
7. The circuit board , which normally , contain the CPU, RAM, is called the **Mother /system board**
8. What is the meaning of the abbreviation POST? ..... **Power on self test**
9. A connecting socket on the outside of the system unity is called a.....**Port**
10. Parallel port are mostly used to connect .....**Printer** to the system unit.

**INDICATE AS T(TRUE) OR F(FALSE) IN THE SPACE PROVIDED**

- |   |              |
|---|--------------|
| 11. Computer can do a restricted number of basic operation .....                                | <b>True</b>  |
| 12. The soldier can use computer to hit an enemy target with precision.....                     | <b>True</b>  |
| 13. Information to one person may be to another person.....                                     | <b>True</b>  |
| 14. One common layout of the keyboard is QWERTY.....  | <b>True</b>  |
| 15. Viruses show us how vulnerable our system are .....   | <b>True</b>  |
| 16. If you perform regular backups , you will hopefully reduce the possibility of recovery..... | <b>False</b> |
| 17. Information from one computer cannot become data to another computer .....                  | <b>False</b> |
| 18. "Random Access" memory means the computer can get data in any order                         | <b>True</b>  |
| 19. Floppy disks access information faster than hard disks .....                                | <b>False</b> |
| 20. Disk access time depend on only the data transfer rate.....                                 | <b>False</b> |

**SECTION B**

1. The computer can perform input operation, processing operation, output operation and then storage operation. Explain this concept as clearly as you can. Full marks will only be awarded for clarity. which party of the computer is/are responsible for each operation
2. A character is represented on the computer as 10110110.What is this value in decimals (hint convert 10110110 base two to decimal (base 10).
3. Draw a well labelled diagram of the component of the computer showing the Input device, the output device , the memory and the storage device and the flow of data between the various component.
4. Indicate what stand alone digital computer can used for in the classroom , general office , account office , stores and students assessment in typical school?

**Section B**

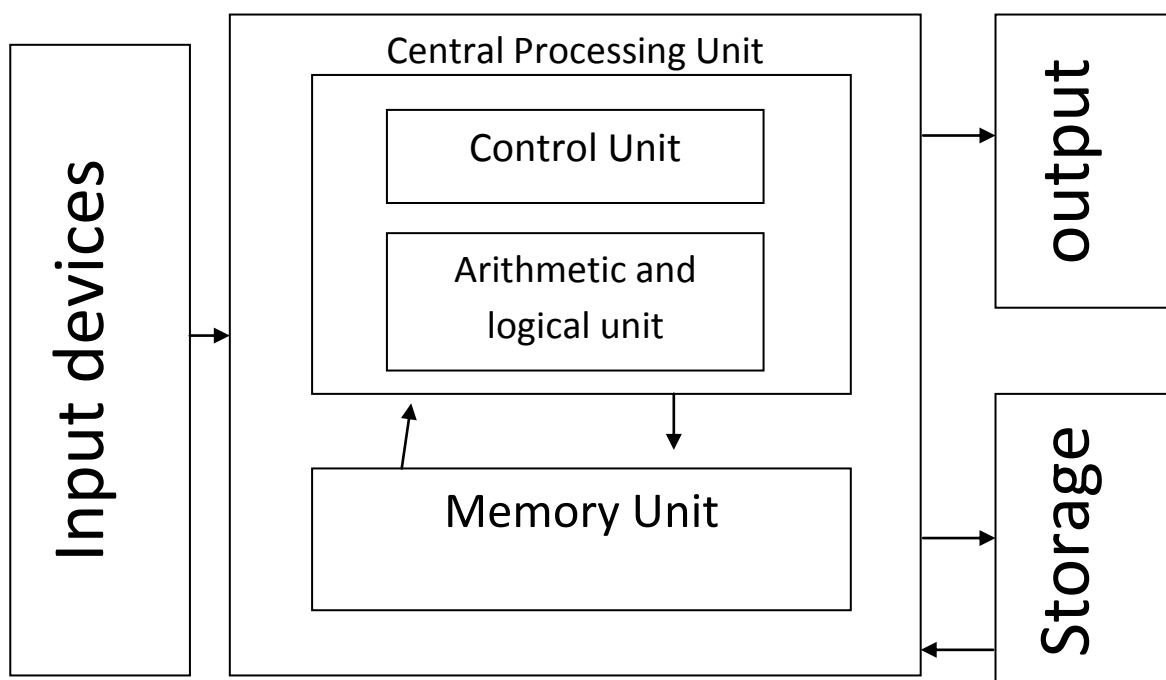
1. Input operation. This function allows data to be entered into the computer for processing. Through this operation the computer can accept data from the outside world with the help of input devices such as keyboard, mouse and scanner.
2. Arithmetic operation. This involves performing addition, subtraction, multiplication and division calculations. Through this operation, data is converted into information. The ALU enable the computer to perform this simple arithmetic notably +, -, \* and /.
3. Logical operation. This allows the computer to compare data and determine if one value is less than, equal to, or greater than another value. All logical operation are performed with the help of the ALU.

4. Output operation. This makes information, generated from the processing on the computer available for use. This result is obtain either by reading it on the monitor or printing it out using a printer. Various forms of output can be produced such as text, pictures, audio or video.
5. Storage operation. This include electronically storing data on an external device for future reference. This operation provides a means of storing the information produce or data or programs for future use. Various storage media are available for this such as Hard drive, CD ROM etc.

2.

$$\begin{aligned}
 &= (1*2^7) + (0*2^6) + (1*2^5) + (1*2^4) + (0*2^3) + (1*2^2) + (1*2^1) + (0*2^0) \\
 &= (1*128) + (0*64) + (1*32) + (1*16) + (0*8) + (1*4) + (1*2) + (0*1) \\
 &= 128 + 0 + 32 + 16 + 0 + 4 + 2 + 0 \\
 &= 182
 \end{aligned}$$

3.



4. **Classroom** – educational software for drill & practice, simulation etc.

**Office** – word processing packages for letters and report writing

**Account Office** – Accounting packages for keeping records of payments of fees etc.

**School store-** inventory software for keeping track of books issued and received.

Student assessment – grading software for processing students assessment results.

**Jan 2010**

**FILL IN THE BLANKS**

1. The acronym EBCDIC stand for Extended Binary Coded.....
2. What is equivalent of the binary 11111111 ( i e 11111111 base 2 )in base 10.....
3. The best way to re –organise your power Point slider is to use .....
4. An example of non-volatile device on the PC is the ....
5. The acronym VDU stands for .....
6. A typical communication channel is the .....
7. When the computer first start it checks the.....
8. The speed of the processor is measured in.....
9. The expansion slot is located on the.....
10. What distributes power inside the computer.....

**TICK OR CIRCLE AS T( TRUE) OR F( FALSE)**

11. Some computer monitor are touch screen T or F
12. A school network is a Wide Area Network Tor F
13. No specifically design input device cater for the handicapped T or F.
14. Microphone can serve as an input device T or F.
15. One advantage of a school network is that it is expensive T or F.
16. Cordless mouse are more expensive than other mouse T or F
17. The laser printer is a character printer Tor F
18. Light pen let you move the pointer and select items on the display screen T or F
19. Telecommunication technologies are heavily used on the Internet Tor F.
20. Non-impact print multiple copies T or F

**SECTION B (15 mark each )**

- 1a. Define an operating system. What does the operating system do ?.
- b. Give three example of operation system software available for PC.
2. A character is represented on the computer as 10011010. What is the value in decimals?
3. Write a short note on floppy disk.(provide 5 unique sentence).

**GOOD LUCK!!!!**

## SOLUTION

1. An operating system is a set of programs that controls and supervises a computer system's hardware.

Its purpose is to manage the hardware for the most efficient use of the computer resources. It also provide an interface between the user and the application/hardware

It dramatically increased the efficiency of the processor and provides standard instruction for hardware. While the PC is running, the operating system resides in the memory/help run application. eg. Microsoft windows, Linux, Unix, Mac Os

An operating system is a set of programs that controls and supervises a computer system's hardware.

It provides a way for the user to interact with the computer.

It manages the processor, or Central Processing Unit (CPU)

It manages the memory and storage.

It manages the computer system's hardware and peripheral devices

It provides a consistent means for software applications to work with the CPU.

eg. Microsoft windows, Linux, Unix, Mac Os

$$\begin{aligned} 2. \quad &= (1*2^7) + (0*2^6) + (0*2^5) + (1*2^4) + (1*2^3) + (0*2^2) + (1*2^1) + (0*2^0) \\ &= (1*128) + (0*64) + (0*32) + (1*16) + (1*8) + (0*4) + (1*2) + (0*1) \\ &= 128 + 0 + 0 + 16 + 8 + 0 + 2 + 0 \\ &= 154 \end{aligned}$$

3. Floppy disk is used of off-line storage

A floppy disk is composed of a disk of thin, flexible magnetic storage medium encased in ..

Good for transferring data and for back up. Easily damaged by magnetic fields.

Now totally superseded by the USB memory stick as a means of mobile storage.

It needs to be formatted (to provide a layout of tracks/segments to organise data storage.

One spin of the disk provides access to all the data hence much faster access than tape.

April/May 2010

1. Computer are classified by purpose as general purpose computer and .....
2. What is the short for Binary Digit.....



3. The illegal copying or use of program is called .....
4. The abbreviation P D A stand for.....
5. Common pointing device found on personal computer is the.....
6. Unsolicited or unwanted e mail is known as.....
7. A folder on the computer contains programs or.....
8. Two example of portable computer are the laptop computer and the.....
9. If you turn off the computer you will lose the information stored in the .....
10. Secret code that allows you access to a computer system or program is .....

**INDICATE AS T(TRUE) OR F(FALSE) IN THE SPACE PROVIDED**

11. The two main type of software are system software and operating software.....
12. Viruses cannot be passed to another computer through a network.....
13. Computers are used to store data and information .....
14. Data and information can be used interchangeably.....
15. Both the RAM and ROM found on the computer are volatile.....
16. It is possible to minimize all program when using MS office.....
17. Anti-virus software is used to clean viruses from computers.....
18. Software is the physical component of the computer.....
19. Another name for the temporary memory is ROM.....
20. MS Word can be used for preparing letter and memo.....

**SECTION B (SHORT ANSWER QUESTION ) 15 MARKS EACH.**

1. What is computer? List the activities are performed by the computer?
2. Why are the following useful in MS Word (i)cut and paste .(ii)copy and paste .(iii) Search and replace .4 Word wrap.
3. Explain why a trainee teacher like you should be computer literate?
4. The operation system manages resource , provide user interface and run application. What is meant these function.

**GOOD LUCK!!!!**

**SOLUTION**

1. Special purpose, 2. Bit, Personal Digital Assistant, 4. Software piracy/software theft, 5. Mouse, 6. Spam/junk mail, 7. Document file, 8. Notebook PC/PDA, 9. RAM, 10. Password, 11. False, 12. False, 13. True, 14. True, 15. False, 16. True, 17. True, 18. False, 19. False, 20. True

## Section B

1. A computer is an electronic machine that can be programmed to accept data (input), process it into useful information (output), store it (into secondary storage device) for safekeeping or later reuse and when necessary send the output to another device (communication). The processing is directed by software and performed by the hardware. Activities performed by the computer are:

Accept data

Process the accepted data

Produces an output of the accepted data

Can store the accepted data for future use

Can send the output to another device

2. **Cut** and **paste** allow you to remove (cut) a section of text from one place in a document and insert (paste) it somewhere else.

**Copy** and **paste** allows you to duplicate a section of text.

**Search and replace** allows you to direct the word processor to search for a particular word or phrase. You can also direct the word processor to replace one group of characters with another everywhere that the first group appears.

**Word wrap** the processor automatically moves to the next line when you have filled one line with text, and it will readjust text if you change the margins.

3. Computers are used in schools for many applications such as writing papers or searching the internet for information.

Computer skills are also a subject being specifically taught in many schools

Where they are widespread, they are also a very useful part of the education system in terms of teaching and learning.

It has created a revolution in education and therefore the trained teacher needs to be computer literate in order to function professionally.

4. **Managing resources** These programs coordinate the entire computer's resources including keyboard, mouse, printer, monitor, storage devices, memory etc

**Providing user interface** This enables user to interact with applications software and hardware. Almost all operating systems today provide a windows-like graphical user interface (GUI) in which icons are used to represent features.

**Running Applications** These programs load and run applications. Most operating systems have the ability to run more than one application at a time. That is multi-tasking.

FILL IN THE BLANKS

(TIME 1 HOUR)

1. The acronym ASCII stand for American Standard Code for information...**Interchange**
2. The decimal equivalent of 1000000 base 2 is.....**128**
3. POST is an abbreviation for power on self .....**Power On Self Test**
4. An example of secondary storage media used on the PC is **hard disk/ CD room, Flash disk, zip drive etc**
5. An example of window operation system used on PC **Windows XP/ME/95/7..**
6. The abbreviation GUI stands for Graphical User...**Interface**
7. The capacity of the hard disk is higher than of the... **floppy disk, flash disk, zip, optical disc**
8. The speed of the processor is measured in ... **hertz, hz, megahertz, gigahertz etc**
9. The power unit is located in the ..... **system unit**
10. The memory of the computer on located on the ..... **motherboard/ system board**

**INDICATE T(TRUE) ORF(FASLSE)**

- |   |              |
|---|--------------|
| 11 The computer can perform decision-making operation.....                      | <b>True</b>  |
| 12The content of the RAM is lost when the power is off.....                     | <b>True</b>  |
| 13. Both the hard drive and the floppy drive are made of metallic platters..... | <b>False</b> |
| 14. One common example of optical disk is the pen drive.....                    | <b>False</b> |
| 15. 8 bit will represent exactly 120 characters only.....                       | <b>False</b> |
| 16. One name commonly used for coding is ASCII.....                             | <b>True</b>  |
| 17. To re- organize your Power Point slide you will need a slider sorter...     | <b>True</b>  |
| 18. The port used to connect the printer is called the serial port....          | <b>false</b> |
| 19. Slides on Power Point presentation can be copied .....                      | <b>True</b>  |
| 20. Timing cannot be added to power point presentation .....                    | <b>False</b> |

**SECTION 'B' 15 marks each**

1. Write a short note on RAM. (PROVIDE FIVE UNIQUE SENTENCE)
2. A character is represented on the computer as 10001000. What is the value is decimal?
3. Defined precisely the following terms? 1. System software 2 Application software .How do they work together? Give two examples each.
4. Provide a short note on floppy disk in the space provided below?

**SECTION B**

1. Other names: Random Access Memory/ Main Memory/ Primary memory

**Reading / Writing:** RAM is memory chips that can be read from and written to.

**Types of Storage:** Temporary storage, stores data, program etc temporary

**Volatility:** Most RAM is volatile: data in Ram is lost when power is turned off.

**Speed of operation:** The more RAM a computer has, the faster it responds

$$\begin{aligned} 2. &= (1*2^7) + (0*2^6) + (0*2^5) + (0*2^4) + (1*2^3) + (0*2^2) + (0*2^1) + (0*2^0) \\ &= (1*128) + (0*64) + (0*32) + (0*16) + (1*8) + (0*4) + (0*2) + (0*1) \\ &= 128 + 0 + 0 + 0 + 8 + 0 + 0 + 0 \\ &= 128 + 8 \\ &= 136 \end{aligned}$$

3. System software is a set of programs that manages the resources of the computer such as the processor, the communication links and the peripherals devices.

Application software is the programs that are written for or by users to enable them perform specific tasks. They are also called application software.

The system software is installed before the application software can be installed.

Examples of system software include, windows, dos, Mac OS, Linux, Unix etc.

Examples of application software include, Word processor-MS word, Spreadsheet-Excel, etc.

4. Floppy disk, used for off-line storage

A floppy disk is a data storage device that is composed of a disk of thin, flexible (“floppy”) magnetic storage medium encased in a square or rectangular plastic shell.

Floppy disks are read and written by a floppy disk drive or FDD

Each disk can hold only 1.44 megabytes of data

Good for transferring data between computers and for backup.

Easily damaged by magnetic fields

Now totally superseded by the USB Memory stick as a means of mobile storage

It needs to be formatted to provide a layout of tracks and segments to organise where the data is stored.

One spin of the disk provides access to all the data hence much faster access than tape.

### ***ANSWER ALL QUESTION (1 HOUR)***

#### ***FILL IN THE BLANKS***

1. The ASCII code is used to represent data / information in the .....

2. The device that help that help user to scan drawing to the computer is the .....

3. The founder of Microsoft Corporation is .....
6. User Interface for computer are either CLI or.....
7. Another name for the Visual Display Unit is.....
8. The speed of computer are measured in .....
9. Beside Internet Explorer another browser is .....
10. The abbreviation ROM stands for .....

***CIRCLE OR TICK OR AS T(TRUE)OR F (FALSE) ON THE TABLE PROVIDED***

11. The computer can perform arithmetic and logical operation .True or False.
12. When you load is off the content of the flash disk is lost. True or False.
13. The capacity of the floppy drive is greater than that of the pen drive. True or False.
14. The esc key on the keyboard is located near the shift key. True or False.
15. CD ROM is an example of compact disk. True or False.
16. When you load MS Windows , MS Office is load automatically. True or False.
17. 1000 bit is equivalent to kilo byte. True or False.
18. A computer virus is designed intentionally to cause annoyance or damage. True or False
19. The BIOS does not manage the keyboard. True or False
20. MS Windows package include Internet Explorer as a browsers.

**SECTION B**

1. What is a (i) Boot sector virus (ii) worm.? How do they work?
2. A character is represent on the computer as 11011000. What is the value in decimals?
3. Write a short notes on (i) Primary memory (ii) Secondary memory in the space provided.
4. Explain the terms (i) Computer- based training (ii) Web based training.

GOOD LUCK !!!

.

**Fill in the blanks**

1. The acronym ASCII stands for American Standard Code for .....**Information Interchange**.
2. The hand-held device that lets you point, click and move objects on the monitor is ...
3. The printer cable connects the printer to the .....

4. An example of output device is the .....
5. Windows XP is an example of an .....
6. The acronym GUI stands for graphical .....
7. Another name for the system board is the .....
8. The speed of the processor is measured in .....
9. A browser allow a PC user to view .....
10. The abbreviation WYSIWYG stands for .....

**Tick or circle as T (true) or F(false) on the table provided**

11. Decision-making operations cannot be performed by the computers
12. When the power is off the content of the RAM is lost.
13. The capacity of the hard drive and the floppy drive are the same.
14. An example of optical disk is the CDDROM
15. 8 bits is equivalent to 1 bite.
16. The QWERTY keyboard is the most common today.
17. A computer virus is not a program.
18. MS Word can be loaded after the booting process
19. The BIOS does not manage the keyboard.
20. MS Office package include only Ms word and Ms Excel.

## **SECTION B**

1. What are (1) analog data transmission and digital data transmission? Give an example in each case. What is the use of a modem in data communication?
2. A data is represented in binary as 10101010. What is the decimals value?
3. What is the meaning of (i) RAM and (ii)ROM? What are they used for on the computer? How do they behave in general?
4. The machine cycle consists of two parts: the instruction cycle and the execution cycle. Describe what happens in both parts.

### **Solution**

1. Information interchange 2. Mouse 3. System unit/parallel port 4. Monitor 5. Operating system 6. User interface 7. Motherboard/printed circuit board 8. Hertz 9. Web pages/web site 10. What you see is what you get
11. **False** 12. **True** 13. **True** 14. **False** 15. **True** 16. **False** 17. **True** 18. **False** 19. **False** 20. **False**

1. **Analog data:** transmission is the passage of data in a continuous wave form. The telephone system is based on analog transmission.

**The digital transmission:** is the passage of data using distinct on and off electrical state and therefore represented by 0s and 1s. the computer understand and uses digital data.

**Modem:** stands for modulation and demodulation. It is a communication device/equipment used to convert data in digital form to analog form so that it can be carried over the telephone line and vice versa after the transmission to be accepted by the other computer. This allows communication between two computers over telephone line.

$$\begin{aligned} 2. &= (1 \cdot 2^7) + (0 \cdot 2^6) + (1 \cdot 2^5) + (0 \cdot 2^4) + (1 \cdot 2^3) + (0 \cdot 2^2) + (1 \cdot 2^1) + (0 \cdot 2^0) \\ &= (1 \cdot 128) + (0 \cdot 64) + (1 \cdot 32) + (0 \cdot 16) + (1 \cdot 8) + (0 \cdot 4) + (1 \cdot 2) + (0 \cdot 1) \\ &= 128 + 0 + 32 + 0 + 8 + 0 + 2 + 0 \\ &= 128 + 32 + 8 + 2 \\ &= 170 \end{aligned}$$

3. **RAM:** stands for Random Access Memory/Main Memory/Primary memory

RAM is memory chips that can be read from and written to by processor

Most RAM is volatile; data in RAM is lost when computer's power is turned off

**ROM:** Stands for Read Only Memory

Memory chips that store permanent data and instructions. Read only

It is a non-volatile memory; it is not lost when computer's power is turned off

4. The instruction cycle

This is the activity of fetching instruction from the main memory and decoding the instruction to determine what is to be done.

The execution cycle

The required operations are carried out on the data and the result stored in memory.

## **ASIGNMENT**

**February 2015**

**Items 1 to 10 consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.**

1. The term that represents millionth is .....
2. A unit of computer memory required to store a single character is called .....
3. The chips that compare two numbers are located in the .....
4. EBCDIC stands for Extended Binary Coded Decimal .....
5. ASCII stands for American Standard Coded Decimal .....
6. A Bit is an acronym which stand for .....
7. Devices attached to the system unit are known as .....
8. The knowledge and ability to use computers and related technology is termed .....
9. The device that records and /or retrieves items to and from storage media is .....
10. ALU stands for .....

**Items 11 to 20 consist of statements followed by T(true) and F(False). Read each statement carefully and indicate whether it is true or false by ticking the appropriate option.**

11	Data must be stored in the main memory in order to be processed.		
12	Unicode makes use of 16 bytes to represent data.		
13	7 bits is larger than 1 byte in terms of storage capacity.		
14	A terabyte (TB) represents about 1 trillion bytes.		
15	Data recovery is part of System Software.		
16	Windows Me is an example of system software.		
17	C++ is an example of application software.		
18	Prom stands for primary read only memory.		
19	Flash memory is volatile.		
20	Serial ports transmit more data/signal at a time than parallel port.		

## Section B

Answer all the questions in this section as clearly as you can in the spaces provided.

1. What is meant by the term special purpose computers?

.....  
 .....  
 .....

- b. How are special purpose computers used in:

- i. Military operation

.....  
 .....  
 .....

- ii. Industries

.....  
 .....  
 .....

- iii. Home appliances

.....  
 .....  
 .....

2. A character is represented on the computer as 10011001. What is this value in decimals?



.....  
.....  
.....  
3.(a) Give **three** differences between system software and application software.

.....  
.....  
.....  
b. List **three** application software that can help improve teaching in the classroom.

.....  
.....  
.....  
4. Name and describe the purpose of each of the following icons found in MS Office.



.....  
.....  
.....  
.....  
.....  
**JANUARY 2008 (REGULAR)**

## **SECTION A**

### **Fill in the blanks**

1. When the computer is first put the ...**operating system**..... is automatically loaded.
2. ---**Synonym**--- will allow you to find an alternative word to use in MSWord document.
3. In MS word misspelled word is underlined with a .....**red wavy line**.....
4. Computer piracy is the illegal copying of .....**software and programs**
5. A method of protecting data, programs, and computer system assets is called...**computer security**...
6. The BIOS manages the peripherals such .....**keyboard, mouse, printer**

7. The main circuit board is called the.....**Motherboard**
8. What is the meaning of the abbreviation FDD.....**Floppy Disk Drive...**
9. A connecting socket on the outside of the system unit is called.....**port**
10. Com ports are mostly used to connect.....**digital camera** .....to the system unit.

**Tick or circle as T for (true) or F for (false).**

11	Computers can do an unlimited number of operations.	<b>T</b>	
12	It is possible to use computer to hit an enemy target with precision.	<b>T</b>	
13	To avoid viruses one should treat all disks as though they are infected.	<b>T</b>	
14	The QWERTY keyboard does not contain numeric pads.		<b>F</b>
15	All viruses are cleaned by any antivirus software ever produced.		<b>F</b>
16	A virus is a parasitic program that infects other programs.	<b>T</b>	
17	A bit is the same as a 8 bites.		<b>F</b>
18	Erasable Read Only memory means the computer can write data only.		<b>F</b>
19	Floppy disks access information much slower than hard disks.	<b>T</b>	
20	Disk access time is faster for the floppy disk than the hard disk.		<b>F</b>

## **FEBRUARY, 2012**

1. A computer system can be identified by 3 elements: hardware, software.....*liveware/end user*.
2. A bar in Ms Windows which contains icons of commands used is known as .....*Taskbar*.....
3. An OS environment that uses icons, menus etc is called.....*graphical user interface*.....
4. A computer represents data in form of .....*binary digit/bit/ 0 or 1..*
5. Data is logically stored on the floppy disk in .....*tracks*.....and .....*sectors*.....
6. In preparing to deliver a lecture an office application that can aid you is ...*MS PowerPoint*...
7. The procedure of maintaining copies of file against accidents is known as .....*backup*.....
8. When data is transform or processed the result is .....*information/output*
9. When an item is deleted, the windows operating system sends it to the .....*recycle bin*.
10. The ASCII coding scheme uses .....*8*.....bits to represent a character

### **Tick or circle T (true) or F (false)**

11	Software can be classified into three categories		<b>F</b>
12	Data is stored on optical disks in the form of light pits	<b>T</b>	
13	EBCDIC is the commonest coding scheme used on microcomputers.		<b>F</b>
14	One Gigabyte (1GB) is 1000 bits.		<b>F</b>
15	101(base 2) is the same as 41 (base 10)		<b>F</b>
16	Authentication is a method of providing the ownership of an element.	<b>T</b>	
17	Another name for the main memory is ROM		<b>F</b>
18	Windows 7 is an example of an operating system	<b>T</b>	
19	Desktop computers are also known as microcomputers	<b>T</b>	
20	UPS can be used as a firewall device		<b>F</b>

### **SECTION B (Short answer questions) 15 mark each.**

#### **1.Give 5 reasons why computers have become powerful.**

##### **Answer:**

- (1) **Speed:** Most computers execute billions and trillions of operations in a single second.
- (2) **Reliability:** the electronic components in computers are dependable and reliable because they rarely break or fail.
- (3) **Accuracy/Consistency:** Given the same input and processes, a computer will produce the same results.

- (4) **Storage:** A computer can store enormous amount of data and make this data available for processing anytime.
- (5) **Communication:** Computers can share information either wireless or through a wired transmission medium.

**2. A character is represented on the computer as 11110000. What is value in decimal?**

**Answer:**

$$\begin{aligned}
 11110000 \text{ base } 2 &= 1 \times 2^7 + 1 \times 2^6 + 1 \times 2^5 + 1 \times 2^4 + 0 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 0 \times 2^0 \\
 &= 1 \times 128 + 1 \times 64 + 1 \times 32 + 1 \times 16 + 0 \times 8 + 0 \times 4 + 0 \times 2 + 0 \times 1 \\
 &= 128 + 64 + 32 + 16 + 0 + 0 + 0 + 0 \\
 &= 240
 \end{aligned}$$

3. (a) What is (i) storage device and (ii) storage media? (b) Write a short note on the hard disk indicating its characteristics.

**Answer:**

**Storage devices** are pieces of equipment that are used to store the data used by a computer, such as a floppy disk drive.

**Storage media** are the actual materials on which the data is stored, such as a floppy disk.

- a. (i) Hard Disk is made of metallic platter tightly sealed.  
(ii) Data is stored magnetically

4. Identify the following icons and their uses



A



B



C



D



E



F

- a) Paste- This Icon enable the user to paste any item is copied to the clipboard in office.
- b) Align left- This permit the user to align any selected text to the left.
- c) Save- The icon allow the user to save any document typed or saved
- d) New Document- The user can create a new document by clicking on this item and also create
- e) Open- This icon allow the user to open the current selected folder
- f) Print – The icon when clicked print any document shown in the window

**Jackson 2012**

1. Computer literacy involves a knowledge and understanding of .....
- a. computer programming

- b. computer and their uses
  - c. computer repairs
  - d. all the above**
2. Computer can.....
- a. accept data
  - b. process data according specified rules
  - c. produce and store results
  - d. all the above**
3. Computers can be used in the classroom (education) for .....
- a. demonstration of concepts and theories
  - b. presentation of learning materials
  - c. helping teachers to keep track of lessons, assessments and grades of students
  - d. all the above**
4. A collection of computers and other equipment organised to share data, information and software through a communication channel is called.....
- a. Internet
  - b. Broadband
  - c. Communication network**
  - d. Internet service provider
5. a part of the internet which supports a huge collection of “pages” of information linked to each other around the globe is often termed as the .....
- a. world wide web**
  - b. web browser
  - c. hyperlinks statements

**Fill in the blank spaces for the following statements**

- 6. Whenever Kojo Tuffour wants to navigate through his computer, he has to use his keyboard by typing commands at prompt. This means the type of operating system Kojo is using is the .....**command line interface**.....
- 7. Abena Pokua “Hi, Harry, I need a program that should guard my computer system against viruses and damaging programs that can invade my computer system”. Harry, “Abena, I think you should install .....**antivirus program**.....
- 8. Dr. Addai: Hello Prof. what class of computers do you recommend for this extremely calculation-intensive task of simulating nuclear bomb detonations?” Prof. Agyei: “Dear Dr. Addai, for this special task I recommend the largest and most powerful computer is called a .....**supercomputer**.....
- 9. The physical components of the computer is called the .....**hardware**.....
- 10. A graphical representation of a program, file, folder or function on a computer screen is called....**icon**.....

**SECTION B (1 mark for each correct answer)**

Circle the correct answer as T(true) or F(False) in the table below

11	An output device is any hardware component that allows you to enter data and instruction into a computer		F
12	Four commonly used input devices are a printer, a monitor, speakers and a portable media player		F
13	The elements of an information system are hardware, software, data, people and procedures		F
14	To use application software, your computer must be running system software	T	
15	Most computers are analog, which means they recognise only two discrete states: on and off		F
16	Most RAM retains its contents when the power is removed from the computer inadvertently		F
17	Read-only memory (ROM) refers to memory chips storing temporary data and instructions		F
18	Antivirus is an example of utility program	T	
19	Computer security is a technique developed to protect computers and network-linked computer system from accidental or intentional harm	T	
20	Firewall is a computer program that replicates itself and transfers itself to another computer system		F

## SECTION C

(Each question carries 15 marks)

Answer All Questions

1. Group the types of devices into their associated categories by writing the words in its corresponding option box. (1 mark for each correct choice made)

### Words

1. Mouse 2. Keyboard 3. Scanner 4. Hard disk 5. CDR-R 6. Printer 7. Headphone 8. Monitor 9. Floppy disk 10. Speaker 11. DVD-R 12. Microphone 13. Pendrive 14. Earphone 15. Joystick

Option 1	Option 2	Option 3
Input devices	Output devices	Storage devices
Mouse, keyboard, scanner, microphone, joystick	Printer, speaker, earphone, headphone, monitor	CD-R, Floppy disk, pendrive, Dvd-R, hard disk

2. What is an Application Software? 5marks

**....it is a type of software that perform specific task or solve one problem eg. Presentation software such as PowerPoint .....**

b. List the five (5) categories of Application Software

i. ....**word processor**.....

ii. ....**authoring**.....

iii. ....**spreadsheet**.....

iv. ....**presentation**.....

v. ....**database**.....

c. State (1) example of each category of Application software

i. ....**word processor eg. Microsoft Word**.....

ii. ....**authoring eg. Dream weaver**.....

iii. ....**spreadsheet eg. Microsoft excel**.....

iv. ....**presentation eg. PowerPoint**.....

v. ....**database eg. Microsoft access**.....

3. Explain briefly the following terms on communication and network.

i. Internet

**.....it is network of networks. It is a global network that links all computers together so that they can share files and programs.....**

ii. Internet Service Provider (ISP)

**.....they are providers who are already connected to the internet and provide a path or connection for individual to access the internet eg. Africa online, CompuServe, MSN, AT&T.....**

iii. World Wide Web

.....it is part of the internet which supports a huge collection of “pages” of information linked to each other around the globe.....

iv. Web Browser

.....it is a software that allows users to access, read and review any document on the web.....

v. Web Site

.....it is a collection of web pages created and maintained by organisations, educational institutions, businesses and individuals. A group of web pages are called website .....

4. Write the following abbreviations that relate to ICT in full. (1 mark each)

- i. LAN .....**Local Area Network**.....
- ii. RAM .....**Random Access Memory**.....
- iii. CPU .....**Central Processing Unit**.....
- iv. CD .....**Compact Disc**.....
- v. VDU .....**Visual Display Unit**.....
- vi. PC .....**Personal Computer**.....
- vii. ROM .....**Read Only Memory**.....
- viii. BIOS ....**Basic Input Output System**.....
- ix. MS-DOS ...**Microsoft Disk Operating System** .....
- x. GUI .....**Graphical User Interface**.....
- xi. IP .....**Internet Protocol**.....
- xii. WWW .....**World Wide Web**.....
- xiii. WAN .....**Wide Area Network**.....
- xiv. ICT .....**Information and Communication Technology**.....



xv. DVD ..... **Digital Versatile Disk** .....

## JACKSON 2013

### SECTION A

For questions 1-20, provide short answers to the following questions. Each question carries 1 mark.

1. The two forms of data communication .....**digital** ..... and ..... **analog** .....
2. Attachments that enhance the performance of the computer system are referred to as .....
3. Unorganised data can also be referred to as .....**raw fact, data**.....
4. The ROM contains the BIOS. What is the full meaning of BIOS? ..... **Basic Input Output System**
5. The process of restarting the computer that does not involve turning on the power is known as .....**warm booting** .....
6. Unauthorised copying and distribution of software is known as ....**privacy**.....
7. In order to surf the internet, you will need a software program call a .... **Browser**.....
8. A blend of digital and analog computer is known as .....**hybrid**.....
9. It is the rectangular box that houses the internal components of the computer system ..... **system unit** .....
10. The international merger of computer games and educational software into a single product is known as .....**edutainment** .....
11. Feedback from the computer can be display on .....**monitor**.....
12. The procedures of maintaining copies of a file against accidents is .....**backup**.....
13. The 2 user interface are the GUI and ....**command line interface**.....
14. Hardware may be defined as the .....**physical**... part of the computer.
15. The speed of the processor is measured in .....**hertz or hz**.....
16. Educational technology is the application of technology in teaching and .....**learning**....
17. The method of protecting data, program and hardware is ....**computer security**.....
18. A digital version of regular book is ....**electronic book or e-book**.....
19. An OS environment that uses icon, menu etc is .....**gui** ....
20. The path through which data is transmitted is .....**bus**....

21	It is the size and cost that classifies a computer as a supercomputer	T	
22	Data has value than information		F
23	Unicode is coding scheme capable of representing all the world's current languages		F

24	There are two types of virus: benign and malignant	T	
25	Command line interface is more user friendly than graphical user interface		F
26	Interactivity in multimedia allows the user to respond and receive feedback	T	
27	Microsoft Word, Microsoft Excel and encyclopaedias are examples of system software		F
28	There are two types of keyboard: QWERTY AND DVORAK	T	
29	Computer network is a system whereby a number of independent computers are linked to share resources	T	
30	Standalone operating systems are built to support mini and micro-computers especially home and office use	T	
31	Input devices accept data and convert them into a form understandable to human beings		F
32	The portion of the CPU that is responsible for arithmetic operation is the ALU	T	
33	The mainframe computer is larger than the minicomputer	T	
34	Application software may be custom-written, packaged or general purpose software	T	
35	The printed book is the counterpart of electronic book		F
36	Materials for web-based training reside on the personal computer of the trainer	T	
37	One of the three-generation backup procedures is grandparent	T	
38	Hypermedia is the type of media that include both graphics and text	T	
39	In the instruction cycle of the machine cycle, the execution of instruction takes place		F
40	The device needed to present audio output is categorised under hardcopy and output devices		F

## SECTION B (60 MARKS)

- List and explain five (5) reasons why computers have become powerful tools. Each point should not be more than three sentences.
- A character is represented on the computer as 11100000. What is this value in decimals?
  - If 0110000 represents the lower case letter "a". What will represent lower case letter "b"?
- With appropriate examples, explain booting in not more than three sentences.
  - Give three (3) differences between the RAM and the ROM.

4. In not more than three sentences, explain each of the following
  - a. What is LAN?
  - b. What is computer network?
  - c. What is a search engine?

## **INPUT DEVICES/MEDIUM**

### **SECTION A**

- 1) A ..... **Digitizer** ..... converts drawings, photos, into digital signal.
- 2) A digitizer converts drawings, photos, into ..... **digital** ..... Signal.
- 3) The technique used in scoring WAEC objective examination is called .....  
.....**Optical Mark Recognition (OMR)**.....
- 4) The cursor is also called the insertion ..... **Pointer** .....
- 5) Data validation ensures that the input data is free from ..... **Errors**  
.....
- 6) The point-of-sales terminal uses the barcode to identify a product's..... **Information**  
...
- 7) The acronym UPC stands for ..... **universal pr//pduct code**.....
- 8) The screen pointer found on the computer is controlled by the ..... **Mouse**  
.....
- 9) A handheld device used at the point-of-sale terminal is the ..... **barcode reader**  
**(i.e. a type of scanner)** .....
- 10) Besides the keyboard the most common input device is the..... **Mouse** .....
- 11) Examples of Toggle keys on the keyboard are Cap lock and ... ..  
**Num lock/Scroll lock/insert key**.....
- 12)
- 13) The typing on the computer is done through a device known as the .....**Keyboard**.....
- 14) To enter text and characters into the computer you will need a device  
called.....**Keyboard**.....
- 15) The general name given to the mouse, trackball joystick etc is .....**pointing**  
**devices**.....
- 16) OMR is the abbreviation for .....**Optical Mark Recognition**.....
- 17) The wheel located between the two buttons of the mouse is used for .....**scrolling**  
**through documents**.....

- 18) The two main input devices found on the modern laptop are the keyboard and .....**touchpad** etc .....
- 19) Another name for the arrow keys is the .....**cursor-movement keys** .....
- 20) Joysticks are the most appropriate input devices to use for .....**Computer games** .....
- 21) The oldest input technology is the .....**paper tape/punch card** .....
- 22) OCR stands for .....**Optical Character Recognition**.....
- 23) The input device always used with a speech recognition software is the ...**microphone**...
- 24) Keyboards that help avoid repetitive stress injury are called ...**Ergonomic**....keyboards
- 25) .....Input device..... converts data into a form that the computer can understand.
- 26) To control the movement of the cursor or pointer on a monitor a ...**mouse**.....is required

**Circle as T (true) or F (false) in the spaces provided below.**

27	QWERTY is the name of the manufacturer of computer keyboards	T	<input checked="" type="radio"/> F
28	The Alt and Ctrl keys (on the PC keyboard) can work on their own selves.	T	<input checked="" type="radio"/> F
29	On the keyboard the FUNCTION keys are programmable.	<input checked="" type="radio"/> T	F
30	QWERTY is the name of the person who inverted the keyboard.	T	<input checked="" type="radio"/> F
31	The Shift key (on the PC keyboard) cannot work alone.	<input checked="" type="radio"/> T	F
32	The generic name for the keys used in moving the cursor around the screen is called cursor-movement or arrows keys.	<input checked="" type="radio"/> T	F
33	Pressing ALT and 155 (from numeric key) will produce the cedi sign.	<input checked="" type="radio"/> T	F
34	Light pen is not an example of an input device	T	<input checked="" type="radio"/> F
35	Digital camera has no memory	T	<input checked="" type="radio"/> F
36	Light Pens let you move the pointer and select item on the display screen	T	<input checked="" type="radio"/> F
37	Microphone cannot also serve as an input device	T	<input checked="" type="radio"/> F
38	Cordless mouse are less expensive than other mouse	T	<input checked="" type="radio"/> F
39	No specifically designed input devices cater for the handicapped	T	<input checked="" type="radio"/> F
40	The pointing device used for computer games is known as the joystick	<input checked="" type="radio"/> T	F
41	The function keys on the computer perform the same functions	T	<input checked="" type="radio"/> F
42	The input device used with a speech recognition software is the microphone	<input checked="" type="radio"/> T	F

43	Digital camera is an example of an output device	T	F
44	Microphone is not an input device	T	F
45	The QWERTY keyboard is the most common today	T	F

## SECTION B

1. What is a computer keyboard? Physically, how is it different from the mouse?

### **Solution**

#### **Keyboard**

- a. The keyboard is the main input peripheral used by all computers
- b. The keyboard allows for user input and action with the computer.
- c. Physically much like many typewriters, the keyboard has all the letters of the alphabet, numbers(0-9), and additional special keys
- d. Some keyboards are rectangular in shape.

#### ***Computer mouse***

- a. Mouse contains at least one button and sometimes as many as three, which can be programmed for different functions.
- b. A popular type of mouse has a wheel (between two of the buttons) that can be used to easily scroll through long documents
- c. This device controls the movement of the cursor or pointer on a display screen.
- d. Some computer mice are oval in shape
- e. The mouse controls the movement of the cursor or pointer on a display screen.

2. ***List the 5 basic parts of the computer keyboard. You are required to teach the pupils at the kindergarten level about keyboard. List the steps you would follow.***

The five (5) basic parts of the computer keyboard are :

- a. Main keyboard (Alphanumeric part)
- b. numeric keys(keypad),
- c. function keys,
- d. screen Navigation(Arrow)keys,
- e. editing keys

***The steps to follow include:***

- a. Create a large keyboard template and place it in front of the class
- b. Make copies of the keyboard template for each table or seat
- c. Instruct the pupils in keyboarding skills starting with return and arrow keys
- d. Arrange the students in pairs to practice the letters and number positions
- e. Finally, let the pupils have the experience of helping each other in finding the keys

### **3. What devices do you need to get data into the computer?**

Input devices enable data and instructions to be entered into the computer. The devices that one needs to get data into the computer include:

- a. The keyboard is used to enter the data and commands into the computer.
- b. The mouse is used to enter responses and commands into the computer
- c. Stylus instead of the keyboard is used to enter data into the PDAs
- d. The laptops use keyboards and trackball mice/trackpoints and touchpad
- e. Microphones and electronic instruments can be used to input sounds and music
- f. Scanners and digital cameras are used to input text and images.

### ***4. What is meant by the following terminologies as used for mouse operations?***

***i) Point ii) Click iii) Double click iv) Right click v) Drag and drop***

- i. Point is to move the pointer to the desired spot on the screen.
- ii. Clicking is pressing and releasing the left mouse button once. Clicking is used to select menu, toolbar, icons and buttons in a dialog box.
- iii. Double Clicking: - This is quickly pressing & releasing the left mouse button twice in rapid succession. There should not be any time lapse between the two clicks as a shortcut to performing a task.

- iv. Right Clicking: - This is pressing & releasing the right mouse button once to display a shortcut (or quick) menu.
- v. Drag and Drop (Moving) objects: - To drag & drop, press and hold down the left mouse button while moving the mouse and hence the pointer (with the image) to where the image is to be placed and then releasing the button.

**4. Explain the following devices- computer keyboard and the mouse to a JHS pupil**

***Keyboard***

- e. The keyboard is the main input peripheral used by all computers
- f. The keyboard allows for user input and action with the computer.
- g. Physically much like many typewriters, the keyboard has all the letters of the alphabet, numbers(0-9), and additional special keys
- h. Some keyboards are rectangular in shape.

***Computer mouse***

- a. Mouse contains at least one button and sometimes as many as three, which can be programmed for different functions.
- b. A popular type of mouse has a wheel (between two of the buttons) that can be used to easily scroll through long documents
- c. This device controls the movement of the cursor or pointer on a display screen.
- d. Some computer mice are oval in shape
- e. The mouse controls the movement of the cursor or pointer on a display screen.

**OUTPUT DEVICES/MEDIUM**

**SECTION A**

- 1) ... ***Output*** ..... is data that has been processed into useful form (called information).
- 2) The most used means of output are the ... ***Printer*** ..... and the ... ***Monitor*** .....
- 3) A(n) ... ***Impact Printer*** ..... strikes paper & ribbon together to form a character.
- 4) Hardcopy is also known as ..... ***Printed output*** .....
- 5) Terminals are also called ... ***Video Display Terminal or Display terminal*** .....

- 6) A ... **dumb** ..... terminal has no ability to process data
  - 7) A terminal consists of a keyboard and a ..... **Monitor** .....
  - 8) Printers can be classified as character printers, ... **Line** .....and ... **page** .....printers
  - 9) A dumb terminal has no ability to process or store..... **data/information** .....
  - 10) Dot Matrix printers are examples of ..... **Impact printers** .....
  - 11) The process of converting digital signal to analog signal is called... **modulation** .....
  - 12) Modems inside the computer and therefore not visible are called .. **Internal modems** ...
  - 13) A device that converts analog signals to digital and vice versa is called a ..... **modem** ....
  - 14) Converting from analog to digital is called ..... **demodulation** .....
  - 15) Com ports are mostly used to connect ..... **modems** ..... to the system unit.
  - 16) To obtain multiple copies of a document, it is appropriate to use ..... **Impact printer** ...
  - 17) The most common output device on a desktop computer is the ... **Monitor** .....
  - 18) The port used to connect the printer is called the..... **Parallel port**.. .....
  - 19) The most vital output device connected to the computer is the ..... **Monitor**.....
  - 20) The abbreviation WYSIWYG stands for ..... **What You See Is What You Get** .....
  - 21) Peripherals are hardware components that connects to the ... **System Unit** .....
  - 22) A scanner can convert printed images into ..... **digital format** .....
  - 23) A computer monitor may also be called a \_\_\_\_\_ or a \_\_\_\_\_  
\_\_\_\_\_.
- Video Display terminal (VDT) or a Visual Display Unit (VDU) etc**
- 24) When a computer prints a report, the output printed is called ..... **hardcopy** .....
  - 25) A plotter is a graphics printer that draws images with ..... **ink pens** .....



26) A printer-like device that prints lines and graphs is called ..... **plotter** .....

27) The acronym LCD stands for... **Liquid Crystal Display** .....

**Circle as T (true) or F (false) in the spaces provided below**

28	An individual dot on a computer screen is called a screen point.	T	<input checked="" type="radio"/> F
29	An individual dot on a computer screen is called a pixel.	<input checked="" type="radio"/> T	F
30	Monitors convert text and pictures sent from the computer into display	<input checked="" type="radio"/> T	F
31	The speed of modern printers is measured in pages per minute (ppm)	<input checked="" type="radio"/> T	F
32	A laser printer will require toner to print	<input checked="" type="radio"/> T	F
33	The laser printer is a Character printer	T	<input checked="" type="radio"/> F
34	Non-impact printers can print multiple copies	T	<input checked="" type="radio"/> F
35	The normal computer monitors are all Touch Screens	T	<input checked="" type="radio"/> F
36	Dot Matrix printers create images and characters by placing dots	<input checked="" type="radio"/> T	F
37	Plotters are devices used in engineering and architectural environments	<input checked="" type="radio"/> T	F
39	Point-of-sale terminal is a stand-alone computer at the counter	<input checked="" type="radio"/> T	F
40	The laser printer is a line printer	T	<input checked="" type="radio"/> F

## **SECTION B**

**1) Explain the terms (i) impact printers and (ii) non-impact printers with examples.**

**i) Impact printers**

- a. Impact printers use a mechanism resembling those of typewriters.
- b. it forms characters or images by striking a mechanism such as a print hammer or wheel against paper and ink ribbon, leaving an image on the paper.
- a. Examples: Dot-matrix & Daisy wheel

**ii) Non-impact printers**

- a. Non-impact printers form characters and images without direct physical contact between the printing mechanism and the paper.
- b. They are faster and quieter than impact printers because they have fewer moving parts.
- c. Examples: Laser & ink **jet printer**

**2) What is meant by the terms “impact and non-impact” printers? Indicate how impact and non-impact printers work. Give one example each.**

Printers are categorized according to whether the printer has contact or not with the medium on which the document is to be placed. That is impact printer or non-impact printers

**iii) Impact printers**

- a. Impact printers use a mechanism resembling those of typewriters.

- b. it forms characters or images by striking a mechanism such as a print hammer or wheel against paper and ink ribbon, leaving an image on the paper.
  - c. Examples: Dot-matrix & Daisy wheel
- iv) *Non-impact printers***
- a. Non-impact printers form characters and images without direct physical contact between the printing mechanism and the paper.
  - b. They are faster and quieter than impact printers because they have fewer moving parts.
  - c. Examples: Laser & ink jet printer

**3) *Distinguish between input devices and output devices***

***Input device***

- a. Input device translates data/programs into a form that the machine can process.
- b. The purpose is to convert human-readable to machine readable
- c. Pressing a key pad, data in human readable form is converted to machine readable form.

***Output device***

- a. Output devices translate data/programs into a form that the humans can understand
- b. Purpose is to convert machine-readable form into human readable form.
- c. Uses consumables like ink, paper, ribbon etc.

**4) *What is a computer display monitor and why are they useful? What types and sizes are available?***

- a. A computer display monitor or simply a monitor is a piece of TV-like electrical equipment that is part of the computer's display system.
- b. The monitor is useful because it enables the user to see whatever is taking place on the computer.
- c. The types are CRT & LCD
- d. The standard sizes include, '15', '17' and '21'

**5) *What is a line printer and how is it different from a character printer?***

***Line printer***

- a. A line printer is a high-speed printer capable of printing an entire line at one time and often used with mainframes, minicomputers, or networked machines rather than with single-user systems.

- b. Line printers are capable of printing a line of about 132 characters at a time. Line printers can achieve printing speed of 1,200 to 3,000 lines per minute.

***Character printer***

- a. A character printer, also character-at-a-time printer is a printer that prints one character at a time. A typical character printer is the dot-matrix printer.
- b. Today, these printers are rarely used because of speed issues and the fact that they are only capable of printing text

***6) What are output devices? Give 5 examples of the common output devices.***

Output devices are devices that translate machine-readable data into human-readable information regardless of the amount of information or the kind of information; for instance: sound, data, images etc.

- i. Examples: Monitor ii. Printers, iii. Plotters, iv. Projectors, v. earphones and vi, speakers

***7. What is the purpose of input devices, output devices & storage devices? Explain clearly using at least 3 unique sentences. Full marks will be awarded for clarity.***

***Input devices: -***

- a. Exist for input operation.
- b. This function allows data to be entered into the computer for processing.
- c. Through this operation the computer can accept data from the outside world with the help of input devices such as the keyboard, mouse, microphone and scanner

***Output devices:-***

- a. Exist for output operation.
- b. This function makes information generated from the processing on the computer available for use.
- c. Various forms of output can be produced such as text, pictures, audio or video.
- d. This result is obtained either by reading it on the monitor or printing it out using a printer

***Storage devices:***

- a. Exist for Storage operation
- b. This operation provides a means of storing the information produced or data or programs for future use.
- c. This includes electronically storing data on an external device for future reference
- d. Various storage media are available for this such as Hard drives, CD- ROM, Pen drives etc.

***8. Display devices used for output offer 2 technologies: CRT and LCD. Provide short notes on these technologies.***

***CRT***

- a. A CRT uses the same bulky glass tube like the TV.
- b. Gun-like mechanism in the tube sprays beams of electrons towards the screen and activates individual dots of colour that form an image.
- c. They are often inexpensive and dependable except that they are bulky and consume a fair amount of power.

***LCD***

- a. LCD produces an image by manipulating light within a layer of liquid crystal cells.
- b. Modern LCD is compact and lightweight and provide an easy-to-read display
- c. The advantage of LCD monitors includes display clarity, low radiation emission, portability and compactness.
- d. They are however more expensive than CRT monitors.

***9. Briefly describe***


***i. The line matrix printer***

***Line printer***

- a. A line printer is a high-speed printer capable of printing an entire line at one time and often used with mainframes, minicomputers, or networked machines rather than with single-user systems.

- b. Line printers are capable of printing a line of about 132 characters at a time.
- c. Line printers can achieve printing speed of 1,200 to 3,000 lines per minute

10. The following are all technologies used in computer display monitors except

- (a) LCD
- (b) TFT
-  (c) VDT
- (d) CRT

11. Explain the following acronyms

- i. CRT: Cathode Ray Tube
- ii. LCD: - Liquid Crystal Display
- iii. VDT:- Video Display Terminal

SEPTEMBER 2015

GNS 112S

INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) II

**Answer ALL the questions in this paper**

**SECTION A (2 marks for each question)**

**Item 1 to 10 consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.**

1. The acronym ASCII stands for American Standard Code for.....**Information Interchange**
2. The decimal equivalence of 10000000 base two is .....**128(base 10).**
3. The parallel port is used to connect the .....**Printer**
4. An example of non-volatile devices on PC is .....**ROM/HARD DISK/FLOPPY DISK etc**
5. Apart from Window XP the other Operating Systems used on PC is .....**Mac/DOS/Windows 7 O/S.**
6. The abbreviation GUI stands for Graphical User .....**Interface**
7. The only number system that the computer deals with at machine level is.**Binary System.**
8. Megahertz is the unit of measurement for the speed of the .....**Processor/Computer**
9. The expansion slot is located on the .....**Motherboard/ System Board**
10. Inside the Computer, power is distributed to other components by the.**Power Supply Unit**

**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

- |           |  |          |          |
|-----------|--|----------|----------|
| <b>11</b> | VRAM stands for Variable Random Access memory.                 | <b>T</b> | <b>F</b> |
| <b>12</b> | RAM is non-volatile.   | <b>T</b> | <b>F</b> |
| <b>13</b> | 8 bit represents 120 characters, symbols and special character | <b>T</b> | <b>F</b> |
| <b>14</b> | An example of coding schemes is the Unicode.                   | <b>T</b> | <b>F</b> |
| <b>15</b> | Flash memory is volatile.                                      | <b>T</b> | <b>F</b> |
| <b>16</b> | PCI stands for peripheral component interconnect.              | <b>T</b> | <b>F</b> |
| <b>17</b> | GHz stands for gigahers.                                       | <b>T</b> | <b>F</b> |
| <b>18</b> | The control unit consist of the CPU and ALU.                   | <b>T</b> | <b>F</b> |
| <b>19</b> | The CPU is an example of software                              | <b>T</b> | <b>F</b> |
| <b>20</b> | Memory may be expressed in MHz                                 | <b>T</b> | <b>F</b> |

## **SECTION B**

**(15 marks each)**

**Answer the following question as clearly as you can in the spaces provided.**

### **1. Briefly describe each of the following computer interface:**

*Users interact with the computer using any of the following; menu-driven and Graphical User Interface*

#### **(a) Menu-driven interface**

- Allows a user choose a command from menu from menus displayed on the screen. Menu provides interface, eliminated the need to know every command because you could select most of the commonly used commands from a menu. However, they were still not easy enough for most people to commonly used commands from a menu.

#### **(b) Graphical User interface**

- It displays images/icons/graphics etc
- Most operating system today use a graphical user interface. Unlike the command and menu driven interfaces used earlier, GUIs display graphics and uses the point-and-click technology of the mouse and cursor, making them more user friendly
-

**2. A character is represented on the computer as 10011010. What is this value in decimals?**

- 10011010 base 2
- $= 1*2^7 + 0*2^6 + 0*2^5 + 1*2^4 + 1*2^3 + 0*2^2 + 1*2^1 + 0*2^0$
- $= 1*128 + 0*64 + 0*32 + 1*16 + 1*8 + 0*4 + 1*2 + 0*1$
- $= 128 + 0 + 0 + 16 + 8 + 0 + 2 + 0$
- $= 154$

**3. What is the work of the following component of the computer?**

**(i) Control Unit**

The Control Unit:

Does most of the rest of the work by telling others to do and when to do them.

Done through a series of instructions that are processed one at time. It might specify for example:

- Direct and coordinate the activities within the PC.
- When data should be placed in the primary memory.
- Which operation should be performed by the ALU on the data.
- Where the results should be stored or directed to (printer etc)

**(ii) ALU**

(iii)- ALU is Arithmetic/ Logic Unit- for arithmetic / computation and Comparison/reasoning

(iv)- ALU performs logic functions which gives the computer the reasoning power. It is used for comparing purposes and other functions such as AND, OR, NOT, NAND, NOR, EXCLUSIVE, OR and EQUIVALENCE

**(iii) Memory**

This is the internal memory used by the processor during processing. It stores all data that must be processed and all programs that must be process data as well as final results before they are output on the screen, printed or stored for later use.

Others:

It stores data , it stores program, it stores results

**4. List four characteristics of the hard disk.**

- Hard disk consists of metallic rather than plastics platter.
- They are also tightly sealed to prevent any foreign matter from getting inside.
- The platters spin continuously.
- The contamination-free environment in which the disks are stored allows very high speeds of rotation, typically 3600 revolutions per minutes.
- The read/write heads do not touch the fast spinning surface because that would wear away the surface and destroy the data. This is referred to as head crash.

- This is so thin that smoke particle, finger print, dust or human hair could cause what is known as head crash.
- Susceptible to head crash happens when the surface of the read/write head or particle on its surface contact the magnetic disk surface.
- The access time depend on 3 factor: Seek time, Rotational delay, Data transfer rate.
- All the tracks being accessed when the access arm is in stationary is called a Cylinder.
- Uses the cylinder method for storing data
- There are three types- the internal HD, Hard disk cartridge and hard disk pack.

**SEPTEMBER 2015**

**GNS 111S**

**SECTION A (2 marks for each question)**

1. The highest symbol used in the binary number system is ..... **1**
2. The highest symbol used in the decimal number system is .....**9**
3. A nibble is always how many bits?.....**4**
4. Computers can do only two things; store numbers and...**do arithmetic/comparison/process/logic**
5. Font is the name assigned to a specific design of .....**characters**
6. The backspace key deletes all text to its .....**left**
7. MS Word is an example of .....**Word processor/ Application/Productivity software**
8. The program which control the processing must be stored in .... **Main memory/primary memory/RAM**
9. Data is retained in memory as long as the computer has .....**electric power/ power.**
10. A monitor is an example of a ..... **Hardware/output/display** .....device.



**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

- |    |  |          |          |
|----|--|----------|----------|
| 11 | The processing unit is composed of the main memory and the processor | <b>T</b> | <b>F</b> |
| 12 | Main memory consists of components which electrically store data.    | <b>T</b> | <b>F</b> |
| 13 | Memory access time measured in Nanoseconds                           | <b>T</b> | <b>F</b> |
| 14 | By capacity mainframes computers comes before mini in power          | <b>T</b> | <b>F</b> |
| 15 | Office 95 is an example of operating system.                         | <b>T</b> | <b>F</b> |
| 16 | Basically there are 3 user interfaces in computing.                  | <b>T</b> | <b>F</b> |
| 17 | Software is made up of Operating system and application software.    | <b>T</b> | <b>F</b> |
| 18 | A desk computer is an example of general purpose computer.           | <b>T</b> | <b>F</b> |
| 19 | The mainframe is the most powerful computer                          | <b>T</b> | <b>F</b> |
| 20 | Changing the appearance of a document is known as editing            | <b>T</b> | <b>F</b> |

## **SECTION B**

**(15 marks each)**

**Answer the following question as clearly as you can in the spaces provided.**

- 1. What does a computer do in general? Why is it important to the trainee teacher?**

A computer has the capability to perform the following activities:

- a) Accept data
- b) Processing data
- c) Produces an output of the accepted data
- d) Can store the accepted data for future use
- e) Can send the output to another device

Computers are used in schools for many applications such as writing papers or searching the Internet for information.

Computer skills are also a subject being specifically taught in many schools, especially from puberty onward- when the ability to abstract forms.

They are also a very useful part of the education system in terms of teaching and learning.

It has created a revolution in education and therefore the trained teacher need to be computer literate in order to function professionally

## **2. What are the types of computers available?**

- a) There is no specific answer to this question as different books may give different options. However some of these should always be present.
- Personal computers
  - Mobile computers or mobile devices
  - Servers
  - Mainframe
  - Supercomputer
  - Embedded computers

## **b) Give two (2) methods that can be used to prevent hardware theft and vandalism.**

**Answer**

Hardware theft is the act of stealing computer equipment.

Hardware vandalism is the act of defacing or destroying computer equipment.

- Physical devices and practical security measures, such as locked doors and windows, can help protect equipment.
- Passwords, protected objects, biometric scan reduce the risk of theft or render a computer useless if it is stolen.

## **3. (a) What is Computer ergonomics? (b) How would you avoid the problems created by ergonomics?**

**Solution**

- (a) In terms of computing, ergonomics refers to how you set up your computer and other equipment to minimise your risk of injury or discomfort
- (b) The following are some guidelines that can help you avoid discomfort, eyestrain, or injuries while you are working at your computer.
- Take breaks from computer tasks.
  - Ensure that the lighting is adequate.
  - Purchase an adjustable chair. Adjust the height of your chair so that your feet touch the floor and include back support.
  - Assume a proper position while typing. Your wrists should be flat with respect to the keyboard and your forearms parallel to the floor. Specially designed ergonomic keyboards and wrist rests can help you achieve the proper position of your wrists.

## **4. What is a word processor? Mention 4 main features and briefly describe what they do.**

A word processor (also more formally known as a document preparation system) is a computer application used for the production (including composition, editing, formatting and possibly printing) of any sort of viewable or printed material.

The main features are:

**Insert text:** Allows you to insert text anywhere in the document.

**Delete text:** to erase characters, words, lines, or pages as easily as you can.

**Cut and paste:** to remove (cut) a section of text from one place in a document and insert (paste) it somewhere else.

**Copy:** allows you to duplicate a section of text

**Page size and margins:** to define various page sizes and margins, and the word processor will automatically readjust the text so that it fits.

**Search and replace:** to direct the word processor to search for a particular word or phrase. It can also replace one group of characters with another everywhere that the first group appears.

**Word wrap:** the word processor automatically moves to the next line when you have filled one line with text, and it will readjust text if you change the margins.

**Print:** allows you to send a document to a printer to get hardcopy.

Others are:

**Headers and footers:** option of creating standard blocks of text that will automatically appear at the top or bottom of each page in a document.

**Footnoting:** automatic sequential numbering of footnotes and positioning of the bottom of their appropriate pages during pagination.

**Automatic Spelling Checker and Corrector:** compares words in the text against an on-line dictionary, flagging items not found in the dictionary and offering alternative spellings and a means of correcting the errors.

SEPTEMBER 2015

GNS 211

**INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) I**

**Item 1 to 10 consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.**

1. The term that represent million byte is .....**megabyte**
2. A unit of computer memory required to store a single character is called ..... **Byte**
3. The chips that compare two numbers are in the .....**ALU**
4. EBCDIC stands for Extended Binary Coded Decimal .....**Interchange Code**
5. ASCII stands for American Standard Code for .....**Information Interchange**
6. A bit is an acronym which stands for ...../**Binary Digit/ Binary Unit**
7. Devices attached to the system unit are known as ..... **Peripherals**
8. The knowledge and ability to use computers and technology is termed... **Computer Literacy**
9. The bundling of several application into one package is called. **Software integration**
10. ALU stands for .....**Arithmetic/ Logic Unit**

**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

- |  |          |          |
|--|----------|----------|
| 11 Data must be store in the main memory in order to be processed      | <b>T</b> | <b>F</b> |
| 12 Unicode makes uses of 16 bytes to represent data                    | <b>T</b> | <b>F</b> |
| 13 7 bits is larger than 1 byte capacity wise in computing             | <b>T</b> | <b>F</b> |
| 14 Terabyte (TB) represents about 1 trillion bytes                     | <b>T</b> | <b>F</b> |
| 15 Data recovery is part of system software                            | <b>T</b> | <b>F</b> |
| 16 Windows Me is an example of system software                         | <b>T</b> | <b>F</b> |
| 17 C++ is an example of application software                           | <b>T</b> | <b>F</b> |
| 18 PROM stands for primary read only memory                            | <b>T</b> | <b>F</b> |
| 19 Flash memory is volatile  | <b>T</b> | <b>F</b> |
| 20 Serial ports transmit more data/signal at a time than parallel port | <b>T</b> | <b>F</b> |

## SECTION B

(15 marks each)

Answer the following question as clearly as you can in the spaces provided.

1. What is meant by the term special purpose computer? How are they used in (a) how are they used in (i) military operation. (ii) industries and (iii) in home appliance?

Special purpose computers are designed to perform a task or restricted number of tasks. In this case a set of instructions that the computer follows to solve a problem may be built into the hardware .

- i. Many of these computers are used for military operations to controlling a military weapon system and to direct the operations of spacecraft, airplanes, tankers, ship, submarines etc.
- ii. They are also used to control device in industries that process steel or chemicals or managing thermal plant or chemical plant.
- iii. Many home appliances such as refrigerators, TVs, heaters and microwave ovens contain small computers to control the appliance(Microcontroller)

2. A character is represented on the computer as 10011001. What is this value in decimal?

$$10011001 \text{ base } 2 = 1*2^7 + 0*2^6 + 0*2^5 + 1*2^4 + 1*2^3 + 0*2^2 + 0*2^1 + 1*2^0$$

2marks

$$= 1*128 + 0*64 + 0*32 + 1*16 + 1*8 + 0*4 + 0*2 + 1*1$$

8marks

$$128 + 0 + 0 + 16 + 8 + 0 + 0 + 1$$

4marks

$$= 153$$

1marks

3. (a) Give three (3) differences between system software and application software. (b) List 3 application software that can help improves teaching in the classroom.

- (a) System software runs the computer system but application software runs over the system software.
  - System software runs and control the hardware unit of the computer system but application but application software help the end help the end user to perform specific task.

- System software is a low level software as it runs at the most basic level. Applications is a high level Software that allow the user to explore the capability of the system.
- (b) Microsoft Power point, Microsoft Encarta, Microsoft Excel, Media Player, MS Word.

4. Name the Icons below and describe its purpose.



A



B



C



D



E



F

- g) Paste- This Icon enable the user to paste any item is copied to the clipboard in office.
- h) Align left- This permit the user to align any selected text to the left.
- i) Save- The icon allow the user to save any document typed or saved
- j) New Document- The user can create a new document by clicking on this item and also create
- k) Open- This icon allow the user to open the current selected folder
- l) Print – The icon when clicked print any document shown in the window

**FEBRUARY 2016**

**GNS 211**

**INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) I**

**Item 1 to 10 consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.**

1. Another name for a special purpose computer is .....**dedicated** .....computer
2. The computer monitor is an example of an ..... **Output**.....device
3. The power supply's function is to..... **convert/distribute**.....power
4. The device that is used to hold data/information permanently is known as ..**secondary storage device/medium**
5. Warm booting a computer system is also referred to as .....**restarting/rebooting**
6. A special-purpose computer that functions within another machine is called .. **Embedded/micro-controller computer**
7. The part of software which allows users to interact with the system is called the .. **User interface**.
8. Which type of software has no copyright or redistribution restriction?...**Open Source**.
9. What is the full meaning of malware? **Malicious Software**.
10. The act of stealing computer equipment is known as ..... **Hardware theft**.

**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

11	Examples of IBM compatible computers include Apple Macintosh	T	F
12	In digital computers, data change continuously	T	F
13	Encryption prevent unauthorized access	T	F
14	The amount of primary storage determines a computer's capabilities	T	F
15	The expansion cards rarely need expansion slots.	T	F
16	If the character 'a' is represented by the binary 1011 then 'c' is 1100.	T	F
17	The first electronic computer was designed based on vacuum tube.	T	F
18	The 2 types of microprocessors- complex and simple instruction set computer	T	F
19	The execution of instruction takes place in the instruction cycle	T	F
20	A high level language used during the 2 <sup>nd</sup> generation include FOURTRAN	T	F

## SECTION B (15 marks for each question)

Answer the following questions as clearly as you can in the space provided.

**1. With reference to the machine cycle and with the aid of a diagram, describe how the CPU processes data.**

Diagram

The machine cycle has 2 cycles

- The two cycles are: Instruction cycle and Execution cycle
- The Instruction cycle: fetching and decoding instructions use in memory
- The Execution cycle: the actions are carried out and the results are stored in the memory

Alternatively:

The machine cycle has 4 function: FETCH ➔ DECODE ➔ EXECUTE ➔ STORE

- FETCH=Instruction is fetched from the memory
- DECODE= Instruction is decoded
- ECUTE= processor takes the required action
- STORE= the results are stored in the memory.

**2. A character is represented on the computer as 01100001, what is its equivalent in decimals?**

$$\begin{aligned} 01100001 &= 0 \times 2^7 + 1 \times 2^6 + 1 \times 2^5 + 0 \times 2^4 + 0 \times 2^3 + 0 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 \\ &= 0 \times 128 + 1 \times 64 + 1 \times 32 + 0 \times 16 + 0 \times 8 + 0 \times 4 + 0 \times 2 + 1 \times 1 \\ &= 0 + 64 + 32 + 0 + 0 + 0 + 0 + 1 \\ &= 64 + 32 + 1 \\ &= 97 \end{aligned}$$

**3 Explain the following terminologies as used in computing, (a) Computer Risk, (b) Software Theft (piracy) and (c) Software Failure with at least two examples each.**

- **(a) Computer Risk:** Any event/action that can cause loss/damage to computer equipment, software, hardware, data/information or processing capabilities)

Examples- destruction of computer hardware/software, Loss/ modification, Software/hardware theft, System failure, Unauthorised use of computer and its resources.

- **(b) SOFTWARE THEFT ( PIRACY):** The unauthorised duplication, distribution of Computer software without the explicit permission from the original owner.



Examples: making copies than the licence agreement stipulates, Installing software licence for more than the stated number, Illegal copy of software.

- ( C ) **SYSTEM FAILURE:** Sudden malfunction of the computer software due to: electrical power fluctuation (under or over voltage), Software unable to produce expected results.
- Hardware failure, Software error leading to loss of data, Hidden bud/ software errors, Virus attacks, Unintention deletion of software component.

#### **4 How do I start MS word if there is no icon on taskbar or shortcut on the desktop?**

1. Click on the **Start button**.
2. **Highlight Programs.** A sub-menu will appear.
3. Look for and **highlight Microsoft Word or Microsoft Office** on the sub-menu.
4. If you find Microsoft Word on the sub-menu, **click on words “Microsoft Word”** and the program will open.

#### ***Alternatively***

- 1 Click on the start menu
- 2 If you find Microsoft Office on the sub menu, **highlight “Microsoft Office”**. A sub-menu will appear.
- 3 Find the words “ Microsoft Word” on the sub-menu and click on the words.
- 4 If you find Microsoft Word on the sub-menu, **click on the words “Microsoft Word”** and the program will open

**APRIL 2016**

**GNS 112S**

### **INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) I1( FINAL RESIST-PHASE 4**

**Item 1 to 10 consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.**

- 1 The acronym ASCII stands for American Standard Code for .....**Information Interchange**.
- 2 The decimal equivalent of 10000000 base 2 is .....**128**.....
- 3 The parallel port is used to connect the .....**Printers**.....

- 4 An example of non- volatile devices on the PC is .....**Hard disk/CD ROM etc**.....
- 5 Apart from Windows XP the other Operating System used on PC is ....**Windows 2000 etc.**
- 6 The abbreviation GUI stands for Graphical User ...**Graphical User Interface**.....
- 7 POST stands for .....**Power on self test**.....
- 8 Megahertz is the unit of measurement for the speed of the .....**processor**.....
- 9 The expansion slot is located on the .....**motherboard/system board**.....
- 10 Inside the computer, power is distributed to other components by ...**power supply unit**....

**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

11	HDD is the acronym for Hard Data Disk	<b>T</b>	<b>F</b>
12	MS Windpws is a command line user interface	<b>T</b>	<b>F</b>
13	Loading the operating system into memory is called booting	<b>T</b>	<b>F</b>
14	CD-ROM is not an example of an optical disk	<b>T</b>	<b>F</b>
15	The storage capacity of CD-ROM is 1.44MB	<b>T</b>	<b>F</b>
16	Linux Operating system is a product of Microsoft	<b>T</b>	<b>F</b>
17	ACII was developed for use by all Personal computers	<b>T</b>	<b>F</b>
18	EBCDIC is an extension of BCD coding scheme	<b>T</b>	<b>F</b>
19	64 bits is equivalent to 64 bytes	<b>T</b>	<b>F</b>
20	CLI stands for Command Line Instruction	<b>T</b>	<b>F</b>

### **SECTION B (15 marks each)**

- 1.** Describe the RAM in terms of its characteristics as clearly as you can.

RAM:

- Reading/Writing: RAM is memory chips that can be read from and written to.
- Type of Storage: Temporary storage. Stores data, program etc temporary.
- Volatility: Most RAM is volatile; data in RAM is lost when power is turned off.
- Speed of operation: The more RAM a computer has, the faster it responds.

- Other names: Random Access Memory/ main memory/ primary storage

OR

RAM stands for Random Access Memory. It is also called main memory or primary storage. RAM is memory chips that can be read from and written to by processor.

Most RAM is volatile: data in RAM is lost when computer's power is turned off.

The more the capacity of the RAM a computer has, the faster it responds

It is volatile

2. A character is represented by 10110000. What is its value in decimals.

$$\begin{aligned}
 10110000 \text{ base } 2 &= 1*2^7 + 0*2^6 + 1*2^5 + 1*2^4 + 0*2^3 + 0*2^2 + 0*2^1 + 0*2^0 \\
 &= 1*128 + 0*64 + 1*32 + 1*16 + 0*8 + 0*4 + 0*2 + 0*1 \\
 &= 128 + 0 + 32 + 16 + 0 + 0 + 0 + 0 = 128 + 0 + 16 + 0 \\
 &= 128 + 48 = 176
 \end{aligned}$$

3. In 5 unique sentences state the functions of the Operating System. Give 3 examples of OS for PCs.

The operating system performs several specific functions:

- It provides a way for the user to interact with the computer/provide an interface.
- It manages the processor, or central processing unit (CPU).
- It manages the memory and storage.
- It manages the computer system's hardware and peripheral devices.
- It provides a consistent means for software applications to work with the CPU.
- EXAMPLES: Ms Windows 95, Windows 2000, Windows 7

4. How is electric power used by the PC? Why is cooling the fan used on the PC.

The electricity available from the wall outlet is Alternating Current (AC), but a microcomputer runs on direct current (DC). Hence the power supply converts power from AC (115-120 volts or 220 volts) to lower voltages DC (typically 5-12 volts) to run the computer.

Cooling Fan

Because electricity can generate a lot of heat, there is a fan/heat sink etc inside. The power supply keeps it and other component from becoming too hot. This fan is responsible for the noise when the PC runs. The power supply is designed to blow when too much power is supplied into it. This is to ensure that the rest of the system is not damaged or overheated and destroyed itself.



**APRIL 2016**

**GNS 111Sp4**

**INTRODUCTION TO INFORMATION AND COMMUNICATION TECHNOLOGY  
(ICT) FIRST YEAR, END-OF-FIRST SEMESTER FINAL RESIST EXAMINATION**

**SECTION A (2 marks for each question)**

1. To reverse an action performed on a document, you will need to click.....**Undo...**
2. **CLI** stands for Command .....**Command line interface**.....
3. System software is commonly called.....**Operating system**.....
4. Italic is an example of the .....**font style**.....
5. GUI stands for.....**Graphical User Interface**.....
6. Another name for the motherboard is .....**system board/main circuit board**.....
7. To create and edit a document one needs a .....**word processor**.....
8. Illegal instructions placed in the middle of legitimate program refers to .....**virus**.....
9. An example of an anti-virus software is .....**AVG**.....
10. Computers can be classified by type, by purpose, and by .....**size/capacity**.....

**Items 11 to 20 consist of statements followed by T(True) and F (False). Indicate whether each statement is True or False by ticking the appropriate option.**

11	Application software is also called end user software	<b>T</b>	<b>F</b>
12	The terminal as a piece of hardware refers only to the monitor	<b>T</b>	<b>F</b>
13	Microsoft Word is an example of Utility Program	<b>T</b>	<b>F</b>
14	To avoid computer viruses, it is essential to change your PC	<b>T</b>	<b>F</b>
15	Backspace deletes character to the left of the cursor	<b>T</b>	<b>F</b>
16	An example of data capturing device is keyboard	<b>T</b>	<b>F</b>
17	One role of computer in our daily activities is to increase cost	<b>T</b>	<b>F</b>
18	Hardware devices are input devices	<b>T</b>	<b>F</b>
19	The standard layout of letters on the keyboard is the QWERTY	<b>T</b>	<b>F</b>
20	Anti-virus softwares are written by computer programmers	<b>T</b>	<b>F</b>

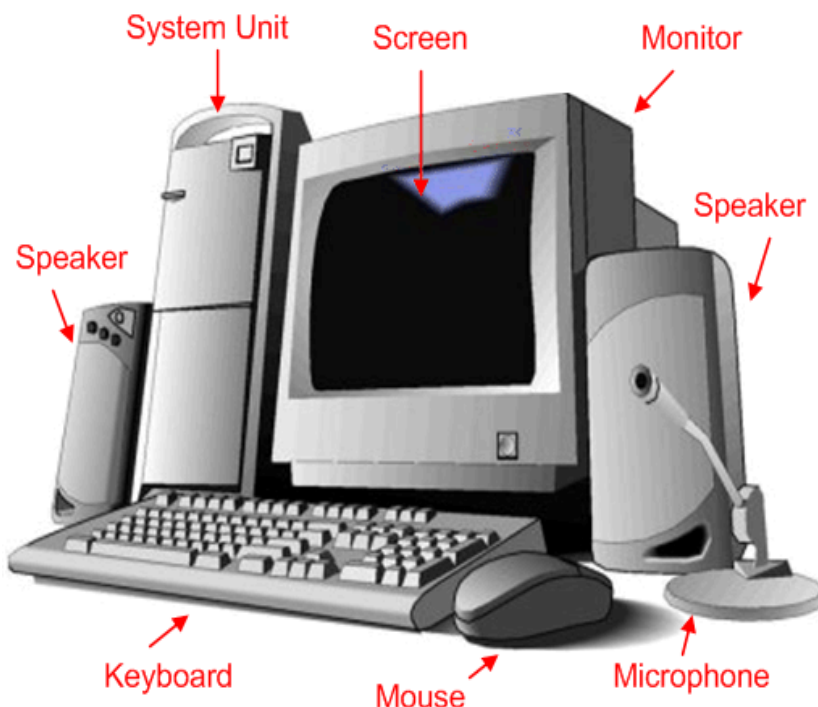
## SECTION B (15 marks each)

1. List and describe 4 basic functions performed by the computer.

Functions/Activities performed by the computer are:

- (a) Accepts data:- accept data input at the keyboard for processing
- (b) Processes the accepted data- process data accepted by the computer
- (c) Produces an output of the accepted data- output the processed result to a printer
- (d) Can store the accepted data for future use- store data and result for further use.
- (e) Can send the output to another device- store the data on another device.

2. Label the diagram



3. What is a computer virus? How would you prevent your PC from virus infection?

A virus, the most common type, is a computer program developed with the intent to replicate and pass itself undetected to multiple computers.

The best way to prevent viruses from infecting your computer files is to ensure that you have up-to-date virus-protection software installed on your computer. As a general rule:

Run anti-virus program regularly.

Make regular backups of your documents

Scan all floppy disks before use(treat all disks as though they were infested)

Download from trusted Web sites

Beware of e-mail attachments- scan them first.

Delete junk e-mails- don't forward chain email

4. Differentiate between dedicated computer and general purpose computer.

Special purpose computers or dedicated computers are most of the time designed to perform a task or restricted number of tasks. This is to say that computer may have been designed to solve a problem, may be built into the hardware.

General-purpose computers are designed to solve a wide range of problems. They can perform any task required simply by changing the application program stored in their main memory. This makes it possible to use such a computer for task such as banking, accounting, scientific analysis etc, for instance, a desktop computer can be used to play games, write letters, draw pictures, or solve mathematical problems

COURSE CODE: GNS211 – **FEBRUARY 2016**

COURSE TITLE: INTRODUCTION TO INFORMATION & COMMUNICATIONS TECHNOLOGY (REGULAR)

SECTION A (Each Question Carries 2 Marks)

Items (1 to 10) consist of incomplete statements with blank spaces. Fill in the blanks with the appropriate responses on the question paper.

1. In binary numbering system, the base is .....(**two**).....
2. Special purpose computers are also known as .....(**dedicated computers**)...
3. The largest binary value that can be contained in a byte is .....(**11111111**)....
4. GUI stands for .....(**Graphical User Interface**).....
5. A Computer program that safeguards against viruses is called..(**Anti-virus/Anti Malware**)
6. A graphic symbol that represent programs, files, folders, or other things on the desktop is called.....(**Icon**).....
7. The area of the display screen of the computer where images, windows, icons and graphical items appear is known as .....(**Desktop**).....
8. The act of stealing computer equipment is termed as .....(**Hardware Theft**).....
9. Digital literacy is known as .....
10. In a graphical user interface, the list of options users select from is known as ...(**Menu**)

For items(11 to 20), consist of statements. Read each statement carefully and indicate in the response box whether a statement is **True** or **False**.

	Statement	response
11	Office vista is a version of MS office	False
12	Superscript is a font style.	False
13	WordPerfect is an example of word processing software	True
14	Analog computers are basically measuring devices	True
15	EBCDIC is an eight bits coding schemes	True
16	The control unit consist of CPU and ALU	False
17	Another name for the CPU is the system unit	False
18	Multiprocessing is the concurrent processing of several programs by a single CPU	false
19	Unix is an example of multiuser operating system	True
20	Copyright does not gives authors and artists exclusive rights to duplicate their work	False



Items (21 to 30), consist of three columns labelled Response, Terms in ICT and Definition - under which are definitions of ICT terms labelled A to L. Match each term with the appropriate definition by writing the letter of the alphabet in the appropriate box of the Response column.

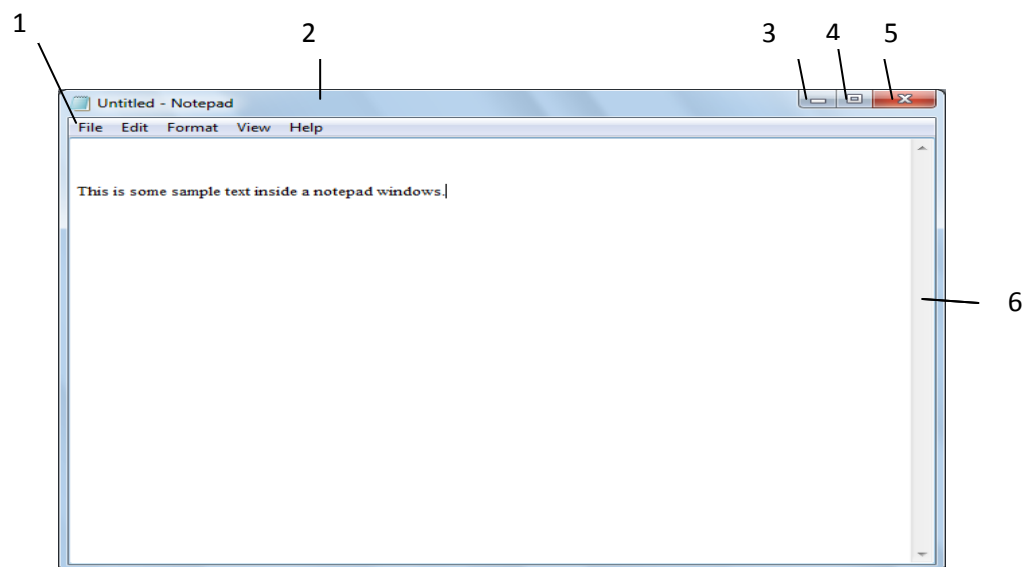
	response	Term	Definition
21	<b>E</b>	Application Software	<b>A.</b> When someone steals personal or confidential information. <b>B.</b> Socket on the motherboard that can hold an adapter card. <b>C.</b> The right to use a software. <b>D.</b> Performs arithmetic, comparison, and other operations <b>E .</b> A computer program that solves end-user task. <b>F.</b> Prolonged malfunction of a computer <b>G.</b> Consists of memory chips that can be read from and written onto. <b>H.</b> Component of the processor that directs and coordinates operations. <b>I.</b> Moral guidelines that govern the use of computers and information systems <b>J.</b> Act of defacing or destroying computer equipment
22	<b>D</b>	Arithmetic and logic unit	
23	<b>A</b>	Information theft	
24	<b>B</b>	Expansion slot	
25	<b>F</b>	System failure	
26	<b>G</b>	Main memory	
27	<b>I</b>	Computer ethics	
28	<b>J</b>	Hardware vandalism	
29	<b>C</b>	License agreement	
30	<b>H</b>	Control unit	

#### SECTION B

(Each Question Carries 10 Marks)

Answer the following questions as clearly as you can in the space provided.

1. (a) Label the parts of the windows in the figure 1. [6 marks]



**Figure 1- Parts of a window**

1. Menu bare (File Menu)
2. Title bar
3. Minimize button
4. Maximize button
5. Close button
6. Scroll bar

7.

(b) Distinguish between “copy” and “cut” commands. [4marks]

Cut command removes a block of text (take off) from its old or original location and creates a copy of the block in another location.

Copy command leaves the block of text intact (duplicate) in its original location but creates a copy of the block.

2. List and explain four (4) possible causes of computer system failure. [10 marks]

- i. Aging hardware;
- ii. Natural disasters such as fires, floods, or hurricanes;
- iii. Random events such as electrical power problems;
- iv. Human error
- v. Virus
- vi. Hacking/Cracking etc

3. How would you explain the following hardware components to basic four class pupils? [10 marks]

(a) Monitor:

Monitor is a device used to display the output of any PC system

(b) System Unit.

System Unit is a container/cabinet that houses most of the electronic components that make up a computer.

(c) Keyboard is a rectangular input device that allows PC users to enter data into the computer's memory

(d) Mouse:

Mouse is an oval /handheld/ pointing device that allows one to point, click and enter data into the computer.

4. List and explain the four (4) stages of the machine cycle. [10 marks]

The steps performed by the CPU to process instruction is called Machine cycle and it is made up of four steps.

- (a) Fetch – the control unit fetches the instruction from memory and put it in a register.
- (b) Decode – the control unit decodes the instruction and determines the memory location.
- (c) Execute- the control unit moves the data from memory to the register in the ALU. ALU is given control and performs the actual operation on the data.
- (d) Store- the CU stores the results of the operation in memory

## **INPUT DEVICES/MEDIUM**

### **SECTION A**

- 1) A ..... **Digitizer** ..... converts drawings, photos, into digital signal.
- 2) A digitizer converts drawings, photos, into ..... **digital** ..... Signal.
- 3) The technique used in scoring WAEC objective examination is called .....  
.....**Optical Mark Recognition (OMR)**.....
- 4) The cursor is also called the insertion ..... **Pointer** .....
- 5) Data validation ensures that the input data is free from ..... **Errors** .....
- 6) The point-of-sales terminal uses the barcode to identify a product's..... **Information** ...
- 7) The acronym UPC stands for ..... **universal pr//pproduct code**.....
- 8) The screen pointer found on the computer is controlled by the ..... **Mouse** .....
- 9) A handheld device used at the point-of-sale terminal is the ..... **barcode reader (i.e. a type of scanner)** .....
- 10) Besides the keyboard the most common input device is the..... **Mouse** .....
- 11) Examples of Toggle keys on the keyboard are Cap lock and ... ..  
**Num lock/Scroll lock/insert key**.....
- 12)
- 13) The typing on the computer is done through a device known as the .....**Keyboard**.....
- 14) To enter text and characters into the computer you will need a device called.....**Keyboard**.....
- 15) The general name given to the mouse, trackball joystick etc is .....**pointing devices**.....
- 16) OMR is the abbreviation for .....**Optical Mark Recognition**.....
- 17) The wheel located between the two buttons of the mouse is used for .....**scrolling through documents**.....
- 18) The two main input devices found on the modern laptop are the keyboard and .....**touchpad** etc .....
- 19) Another name for the arrow keys is the .....**cursor-movement keys** .....
- 20) Joysticks are the most appropriate input devices to use for .....**Computer games** .....
- 21) The oldest input technology is the .....**paper tape/punch card** .....
- 22) OCR stands for .....**Optical Character Recognition**.....
- 23) The input device always used with a speech recognition software is the ...**microphone**...
- 24) Keyboards that help avoid repetitive stress injury are called ... **Ergonomic** ...keyboards
- 25) .....Input device..... converts data into a form that the computer can understand.

26) To control the movement of the cursor or pointer on a monitor a ...**mouse**.....is required

**Circle as T (true) or F (false) in the spaces provided below.**

27	QWERTY is the name of the manufacturer of computer keyboards	T	<input checked="" type="radio"/> F
28	The Alt and Ctrl keys (on the PC keyboard) can work on their own selves.	T	<input checked="" type="radio"/> F
29	On the keyboard the FUNCTION keys are programmable.	<input checked="" type="radio"/> T	F
30	QWERTY is the name of the person who inverted the keyboard.	T	<input checked="" type="radio"/> F
31	The Shift key (on the PC keyboard) cannot work alone.	<input checked="" type="radio"/> T	F
32	The generic name for the keys used in moving the cursor around the screen is called cursor-movement or arrows keys.	<input checked="" type="radio"/> T	F
33	Pressing ALT and 155 (from numeric key) will produce the cedi sign.	<input checked="" type="radio"/> T	F
34	Light pen is not an example of an input device	T	<input checked="" type="radio"/> F
35	Digital camera has no memory	T	<input checked="" type="radio"/> F
36	Light Pens let you move the pointer and select item on the display screen	T	<input checked="" type="radio"/> F
37	Microphone cannot also serve as an input device	T	<input checked="" type="radio"/> F
38	Cordless mouse are less expensive than other mouse	T	<input checked="" type="radio"/> F
39	No specifically designed input devices cater for the handicapped	T	<input checked="" type="radio"/> F
40	The pointing device used for computer games is known as the joystick	<input checked="" type="radio"/> T	F
41	The function keys on the computer perform the same functions	T	<input checked="" type="radio"/> F
42	The input device used with a speech recognition software is the microphone	<input checked="" type="radio"/> T	F
43	Digital camera is an example of an output device	T	<input checked="" type="radio"/> F
44	Microphone is not an input device	T	<input checked="" type="radio"/> F
45	The QWERTY keyboard is the most common today	<input checked="" type="radio"/> T	F

## SECTION B

1. What is a computer keyboard? Physically, how is it different from the mouse?

### Solution

#### Keyboard

- a. The keyboard is the main input peripheral used by all computers
- b. The keyboard allows for user input and action with the computer.
- c. Physically much like many typewriters, the keyboard has all the letters of the alphabet, numbers(0-9), and additional special keys

- d. Some keyboards are rectangular in shape.

***Computer mouse***

- a. Mouse contains at least one button and sometimes as many as three, which can be programmed for different functions.
- b. A popular type of mouse has a wheel (between two of the buttons) that can be used to easily scroll through long documents
- c. This device controls the movement of the cursor or pointer on a display screen.
- d. Some computer mice are oval in shape
- e. The mouse controls the movement of the cursor or pointer on a display screen.

***2. List the 5 basic parts of the computer keyboard. You are required to teach the pupils at the kindergarten level about keyboard. List the steps you would follow.***

The five (5) basic parts of the computer keyboard are :

- a. Main keyboard (Alphanumeric part)
- b. Numeric keys (keypad)
- c. Function keys
- d. Screen Navigation (Arrow) keys
- e. Editing keys

***The steps to follow include:***

- a. Create a large keyboard template and place it in front of the class
- b. Make copies of the keyboard template for each table or seat
- c. Instruct the pupils in keyboarding skills starting with return and arrow keys
- d. Arrange the students in pairs to practice the letters and number positions
- e. Finally, let the pupils have the experience of helping each other in finding the keys

### **3. What devices do you need to get data into the computer?**

Input devices enable data and instructions to be entered into the computer. The devices that one needs to get data into the computer include:

- a. The keyboard is used to enter the data and commands into the computer.
- b. The mouse is used to enter responses and commands into the computer
- c. Stylus instead of the keyboard is used to enter data into the PDAs
- d. The laptops use keyboards and trackball mice/trackpoints and touchpad
- e. Microphones and electronic instruments can be used to input sounds and music
- f. Scanners and digital cameras are used to input text and images.

### **4. What is meant by the following terminologies as used for mouse operations?**

*i) Point ii) Click iii) Double click iv) Right click v) Drag and drop*

- i. Point is to move the pointer to the desired spot on the screen.
- ii. Clicking is pressing and releasing the left mouse button once. Clicking is used to select menu, toolbar, icons and buttons in a dialog box.
- iii. Double Clicking: - This is quickly pressing & releasing the left mouse button twice in rapid succession. There should not be any time lapse between the two clicks as a shortcut to performing a task.
- iv. Right Clicking: - This is pressing & releasing the right mouse button once to display a shortcut (or quick) menu.
- v. Drag and Drop (Moving) objects: - To drag & drop, press and hold down the left mouse button while moving the mouse and hence the pointer (with the image) to where the image is to be placed and then releasing the button.



#### 4. Explain the following devices- computer keyboard and the mouse to a JHS pupil

##### **Keyboard**

- e. The keyboard is the main input peripheral used by all computers
- f. The keyboard allows for user input and action with the computer.
- g. Physically much like many typewriters, the keyboard has all the letters of the alphabet, numbers(0-9), and additional special keys
- h. Some keyboards are rectangular in shape.

##### **Computer mouse**

- a. Mouse contains at least one button and sometimes as many as three, which can be programmed for different functions.
- b. A popular type of mouse has a wheel (between two of the buttons) that can be used to easily scroll through long documents
- c. This device controls the movement of the cursor or pointer on a display screen.
- d. Some computer mice are oval in shape
- e. The mouse controls the movement of the cursor or pointer on a display screen.

## **OUTPUT DEVICES/MEDIUM**

### **SECTION A**

- 1) ... **Output** ..... is data that has been processed into useful form (called information).
- 2) The most used means of output are the ... **Printer** ..... and the ... **Monitor** .....
- 3) A(n) ... **Impact Printer** ..... strikes paper & ribbon together to form a character.
- 4) Hardcopy is also known as ..... **Printed output** .....
- 5) Terminals are also called ... **Video Display Terminal or Display terminal** .....
- 6) A ... **dumb** ..... terminal has no ability to process data
- 7) A terminal consists of a keyboard and a ..... **Monitor** .....
- 8) Printers can be classified as character printers, ... **Line** .....and ... **page** .....printers
- 9) A dumb terminal has no ability to process or store..... **data/information** .....
- 10) Dot Matrix printers are examples of ..... **Impact printers** .....
- 11) The process of converting digital signal to analog signal is called... **modulation** .....
- 12) Modems inside the computer and therefore not visible are called .. **Internal modems** ...

- 13) A device that converts analog signals to digital and vice versa is called a ..... **modem** ....
- 14) Converting from analog to digital is called ..... **demodulation** .....
- 15) Com ports are mostly used to connect ..... **modems** ..... to the system unit.
- 16) To obtain multiple copies of a document, it is appropriate to use ..... **Impact printer** ...
- 17) The most common output device on a desktop computer is the ... **Monitor** .....
- 18) The port used to connect the printer is called the..... **Parallel port**.. .....
- 19) The most vital output device connected to the computer is the ..... **Monitor**.....
- 20) The abbreviation WYSIWYG stands for ..... **What You See Is What You Get** .....
- 21) Peripherals are hardware components that connects to the ... **System Unit** .....
- 22) A scanner can convert printed images into ..... **digital format** .....
- 23) A computer monitor may also be called a \_\_\_\_\_ or a \_\_\_\_\_ .  
**Video Display terminal (VDT) or a Visual Display Unit (VDU) etc**
- 24) When a computer prints a report, the output printed is called ..... **hardcopy**.....
- 25) A plotter is a graphics printer that draws images with ..... **ink pens** .....
- 26) A printer-like device that prints lines and graphs is called ..... **plotter**.....
- 27) The acronym LCD stands for... **Liquid Crystal Display** .....

**Circle as T (true) or F (false) in the spaces provided below**

28	An individual dot on a computer screen is called a screen point.	T	<input checked="" type="radio"/> F
29	An individual dot on a computer screen is called a pixel.	<input checked="" type="radio"/> T	F
30	Monitors convert text and pictures sent from the computer into display	<input checked="" type="radio"/> T	F
31	The speed of modern printers is measured in pages per minute (ppm)	<input checked="" type="radio"/> T	F
32	A laser printer will require toner to print	<input checked="" type="radio"/> T	F
33	The laser printer is a Character printer	T	<input checked="" type="radio"/> F
34	Non-impact printers can print multiple copies	T	<input checked="" type="radio"/> F
35	The normal computer monitors are all Touch Screens	T	<input checked="" type="radio"/> F
36	Dot Matrix printers create images and characters by placing dots	<input checked="" type="radio"/> T	F
37	Plotters are devices used in engineering and architectural environments	<input checked="" type="radio"/> T	F
39	Point-of-sale terminal is a stand-alone computer at the counter	<input checked="" type="radio"/> T	F
40	The laser printer is a line printer	T	<input checked="" type="radio"/> F

## **SECTION B**

**1) Explain the terms (i) impact printers and (ii) non-impact printers with examples.**

**i) Impact printers**

- a. Impact printers use a mechanism resembling those of typewriters.
- b. it forms characters or images by striking a mechanism such as a print hammer or wheel against paper and ink ribbon, leaving an image on the paper.
- a. Examples: Dot-matrix & Daisy wheel

**ii) Non-impact printers**

- a. Non-impact printers form characters and images without direct physical contact between the printing mechanism and the paper.
- b. They are faster and quieter than impact printers because they have fewer moving parts.
- c. Examples: Laser & ink *jet printer*

**2) What is meant by the terms “impact and non-impact” printers? Indicate how impact and non-impact printers work. Give one example each.**

Printers are categorized according to whether the printer has contact or not with the medium on which the document is to be placed. That is impact printer or non-impact printers

**iii) Impact printers**

- a. Impact printers use a mechanism resembling those of typewriters.
- b. it forms characters or images by striking a mechanism such as a print hammer or wheel against paper and ink ribbon, leaving an image on the paper.
- c. Examples: Dot-matrix & Daisy wheel

**iv) Non-impact printers**

- a. Non-impact printers form characters and images without direct physical contact between the printing mechanism and the paper.
- b. They are faster and quieter than impact printers because they have fewer moving parts.
- c. Examples: Laser & ink jet printer

**3) Distinguish between input devices and output devices**

**Input device**

- a. Input device translates data/programs into a form that the machine can process.
- b. The purpose is to convert human-readable to machine readable
- c. Pressing a key pad, data in human readable form is converted to machine readable form.

**Output device**

- a. Output devices translate data/programs into a form that the humans can understand
- b. Purpose is to convert machine-readable form into human readable form.

- c. Uses consumables like ink, paper, ribbon etc.

**4) What is a computer display monitor and why are they useful? What types and sizes are available?**

- a. A computer display monitor or simply a monitor is a piece of TV-like electrical equipment that is part of the computer's display system.
- b. The monitor is useful because it enables the user to see whatever is taking place on the computer.
- c. The types are CRT & LCD
- d. The standard sizes include, '15', '17' and '21'

**5) What is a line printer and how is it different from a character printer?**

***Line printer***

- a. A line printer is a high-speed printer capable of printing an entire line at one time and often used with mainframes, minicomputers, or networked machines rather than with single-user systems.
- b. Line printers are capable of printing a line of about 132 characters at a time. Line printers can achieve printing speed of 1,200 to 3,000 lines per minute.

***Character printer***

- a. A character printer, also character-at-a-time printer is a printer that prints one character at a time. A typical character printer is the dot-matrix printer.
- b. Today, these printers are rarely used because of speed issues and the fact that they are only capable of printing text

**6) What are output devices? Give 5 examples of the common output devices.**

Output devices are devices that translate machine-readable data into human-readable information regardless of the amount of information or the kind of information; for instance: sound, data, images etc.

**Examples**

- i. *monitor*

- ii. *Printers,*
- iii. *plotters,*
- iv. *Projectors,*
- v. *Earphones and*
- vi. *speakers*

**7. What is the purpose of input devices, output devices & storage devices? Explain clearly using at least 3 unique sentences. Full marks will be awarded for clarity.**

***Input devices: -***

- a. Exist for input operation.
- b. This function allows data to be entered into the computer for processing.
- c. Through this operation the computer can accept data from the outside world with the help of input devices such as the keyboard, mouse, microphone and scanner

***Output devices:-***

- a. Exist for output operation.
- b. This function makes information generated from the processing on the computer available for use.
- c. Various forms of output can be produced such as text, pictures, audio or video.
- d. This result is obtained either by reading it on the monitor or printing it out using a printer

***Storage devices:***

- a. Exist for Storage operation
- b. This operation provides a means of storing the information produced or data or programs for future use.
- c. This includes electronically storing data on an external device for future reference
- d. Various storage media are available for this such as Hard drives, CD- ROM, Pen drives etc.

**8. Display devices used for output offer 2 technologies: CRT and LCD. Provide short notes on these technologies.**

### ***CRT***

- a. A CRT uses the same bulky glass tube like the TV.
- b. Gun-like mechanism in the tube sprays beams of electrons towards the screen and activates individual dots of colour that form an image.
- c. They are often inexpensive and dependable except that they are bulky and consume a fair amount of power.

### ***LCD***

- a. LCD produces an image by manipulating light within a layer of liquid crystal cells.
- b. Modern LCD is compact and lightweight and provide an easy-to-read display
- c. The advantage of LCD monitors includes display clarity, low radiation emission, portability and compactness.
- d. They are however more expensive than CRT monitors.

## **9. Briefly describe**

### ***i. The line matrix printer***

### ***ii. The band printer***

#### ***Line printer***

- a. A line printer is a high-speed printer capable of printing an entire line at one time and often used with mainframes, minicomputers, or networked machines rather than with single-user systems.
- b. Line printers are capable of printing a line of about 132 characters at a time.
- c. Line printers can achieve printing speed of 1,200 to 3,000 lines per minute

#### ***Band Printers***

- a. A band printer is a line printer that uses a metal band, or loop, of type characters as its printing mechanism.

- b. The band contains a fixed set of embossed characters that can only be changed by replacing the band.
- c. The band spins horizontally around a set of hammers, one for each print column. When the required character in the band has revolved to the selected print column, the hammer pushes the paper into the ribbon and against the embossed image of the letter, digit or symbol.

10. The following are all technologies used in computer display monitors except

- (a) LCD
- (b) TFT
- ☒ (c) VDT
- (d) CRT

11. Explain the following acronyms

- i. CRT: Cathode Ray Tube
- ii. LCD: - Liquid Crystal Display
- iii. VDT:- Video Display Terminal

## COMMUNICATION

### SECTION A

- 1) The process of converting digital signal to analog signal is called... **modulation** .....
- 2) Telephone lines are used for voice transmission hence requires ... Analog .....signal.
- 3) Data transmission can be characterized as simplex, ... **half-duplex** .....and ..... **full-duplex** .....
- 4) Simplex transmission sends data in one direction..... **only** .....
- 5) Which device receives and converts signals back into usable information? .. **a receiver** ...
- 6) Half-duplex transmission sends data in both directions ..... **but one at a time** ....
- 7) Half-duplex channel can send and receive data but not at the ..... **same time** ....
- 8) A communication channel is the path through which data is ..... **transmitted** .....
- 9) Communication software is a set of programs that manages data... **transmission** .....
- 10) The fastest communication channel is the ..... **Fibre Optics** .....
- 11) The communication channel used by microwave for transmission is ..... **Open space** ...
- 12) A transmitter takes information and converts it to a signal for ..... **transmission** .....
- 13) A typical communication channel is the ..... **telephone line/twisted pair** .....
- 14) The most common communication medium is the .... **telephone line/wire pair/twisted pair** ..
- 15) Metropolitan Area Network is a network that covers a ..... **city/metropolis** .....
- 16) MAN stands for ..... **Metropolitan Area Network** .....
- 17) The term wireless network refers to any type of network that is ..... **wireless** .....
- 18) Any device connected to a network is referred to as a ..... **node** .....
- 19) A set of programs that manages data transmission is called a ..... **communication**.....  
software
- 20) A transmitter takes information and converts it to ..... **signal** .....for transmission.
- 21) An example of a communication device that sends and receives data is the ... **modem** ...
- 22) An example of a network device is a ... **hub/switch/router/bridge/gate/repeaters etc** ...



**Circle as T (true) or F (False) in the spaces provided below.**

24	Modem converts analog signal to digital only.	T	<input checked="" type="radio"/> F
25	LAN covers a far wider area than WAN.	T	<input checked="" type="radio"/> F
26	Transmission that occurs in only one direction is known as full-duplex.	T	<input checked="" type="radio"/> F
27	A school network is a Local Area Network	<input checked="" type="radio"/> T	F
28	One disadvantage of a school network is that it is expensive	<input checked="" type="radio"/> T	F
29	Telecommunication technologies are not heavily used on the Internet	T	<input checked="" type="radio"/> F
30	Coaxial cable is an example of a communication medium	<input checked="" type="radio"/> T	F
31	A ring network links all nodes together in a circular chain	<input checked="" type="radio"/> T	F
32	Communication hardware includes terminals	<input checked="" type="radio"/> T	F
33	Local Area Network enables all of its users to exchange programs	<input checked="" type="radio"/> T	F
34	A transmitted signal can only be analog in nature	T	<input checked="" type="radio"/> F
35	WAN and LAN covers the same distance	T	<input checked="" type="radio"/> F
36	Special software manages resources on the network	<input checked="" type="radio"/> T	F
37	An example of simplex communication is the TV set	<input checked="" type="radio"/> T	F
38	Modem stands for modulator and demodulator	<input checked="" type="radio"/> T	F
39	There is no difference whatsoever between the router and the switch	T	<input checked="" type="radio"/> F
40	The fastest communication channel is the Shielded twisted pair	T	<input checked="" type="radio"/> F

## **SECTION B**

**1) a) What is a communication network?**

**b) What are the disadvantages of a network?**

- a. A communication network is a collection of computers and other equipment organized to share data, information, hardware, and software.
- b.
  - i) Access of info. is slower than accessing your computer
  - ii) Adds new problems due to its complexity
  - iii) Less customization is impossible for shared programs & folders
  - vi) Expensive to maintain

**2) a) Differentiate between a LAN and WAN**

**b) List 3 advantages of a network.**

- a) A network is said to be Local Area Network (LAN), if it is confined relatively to a small area, expanding not more a mile apart. On the other hand a network is said to be (WAN) if it has no geographic limit. It covers the world or distances over 100 miles
- b)
  - i. There is increase speed in sharing & transferring files within networks
  - ii) Reduced Cost: Due to shared programs and easy to upgrade in networks

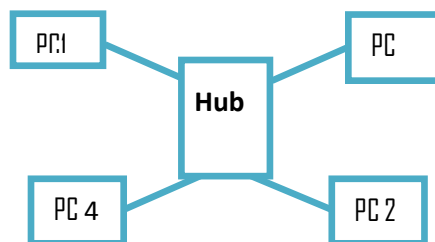
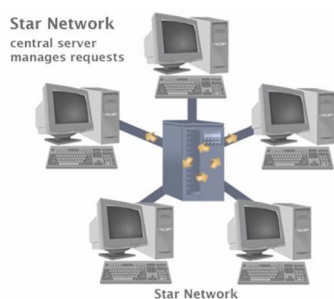
- iii) Centralized software management
- iv) Flexible file access
- v) Resource sharing is possible

3) Draw a diagram to illustrate each of the following:

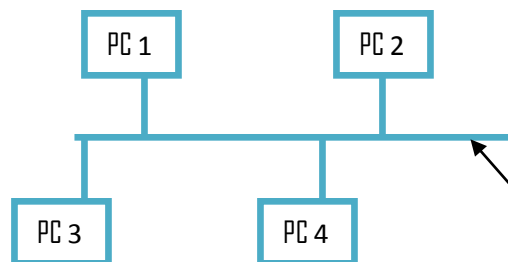
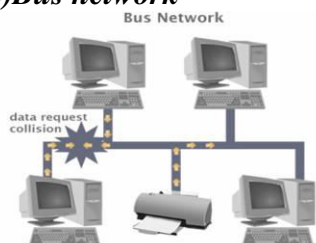
- i. Star network
- ii. Bus network, and
- iii. Ring network.

**Answer**

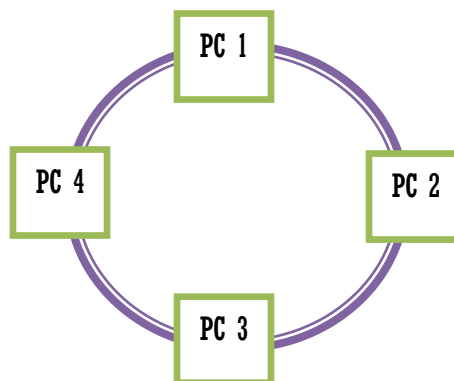
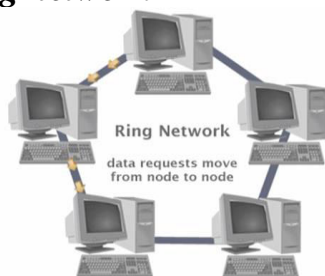
**i) Star network**



**ii) Bus network**

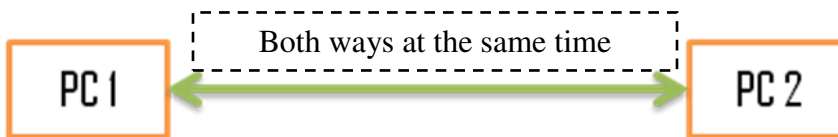
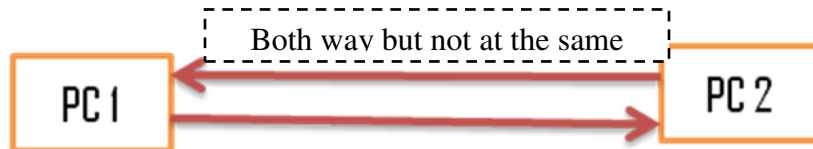
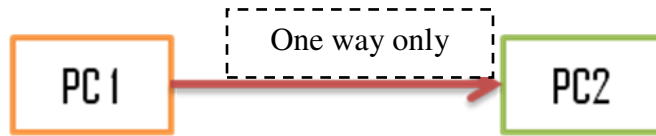


**ii) Ring network**



4. Draw a diagram to illustrate each of the following:

- i) Simplex communication
- ii) Half-duplex communication
- iii) Full-duplex communication



5) Differentiate between Star and Bus Networks.

(In answering this question, consider the following:

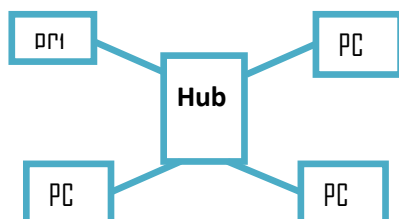
Under Star network, write about the physical structure, Role of the host, advantage & disadvantages linked to design, and draw the diagram .

Under the bus network, write about the physical structure, role of the PCs, advantages & disadvantages linked to design, and draw its simple diagram)

**Answer**

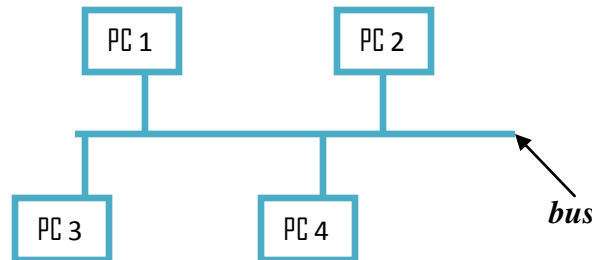
**Star network**

- i. The star pattern connects everything to one host.
- ii. The host is the computer that handles the network's tasks and holds the data
- iii. All communications between computers go through the host
- iv. Configuration is good for large amounts of rapidly changing data.



### **Bus network**

- i. The bus pattern connects the computer to the same communication line
- ii. Communication goes both directions along the line
- iii. All the computers can communicate with each other without having to go through the server.



**6. What is a Star topology? What are the advantages of this type of topology? List seven (7) advantages.**

- a) In a star topology, cable segments from each computer are connected to a centralized hub or switch. If a message is sent to another person's computer, the message goes through the hub or switch, which in turn interprets the address and sends the message to the right computer.
- b) Advantages of a star topology
  - i. Easy to install and wire.
  - ii. No disruptions to the network then connecting or removing devices.
  - iii. Easy to detect faults and to remove parts.
  - iv. Reliable market proven system
  - v. Security can be implemented in the hub/switch.
  - vi. The centre of a star i.e. the hub or switch is best place to find network faults.
  - vii. It is easy to adjust and add new computers to a star network without disturbing the rest of the network.
  - viii. Most suited for large networks
  - ix. Good performance

**6) a) Explain the following terms as used in communication:**

**i) Analog ii) Digital.**

**b) What is the purpose of a modem in data communication?**

- ✓ Analog data transmission is the passage of data in a continuous wave form. The telephone system is based on analog transmission.
- ✓ Digital data transmission is the passage of data using distinct on & off electrical state. It represented by 0s & 1s

### ***Modem stands for Modulation and Demodulation***

It is a communication device/equipment used to convert data in digital form to analog form so that it can be carried over the telephone line and vice versa after the transmission to be accepted by the other computer. This allows communication between two or more computers over telephone lines.

### ***7. What is communication? What is the effect of modern technologies on communication?***

Communication is the transmission of data and information between two or more computers using a communication channel such as a telephone line.

#### **Effects**

It has changed the way people:

- i. interact
- ii. do business
- iii. learn and
- iv. socialize.

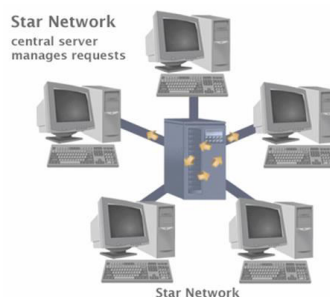
***Telecommunication technologies are heavily used on the internet and other services as E-mail & the Web are provided.***

#### **Negative effects**

- i. Pornography
- ii. Computer crime
- iii. Piracy etc

### ***8. Draw a diagram to illustrate a Star network. What are the advantages of this type of network?***

***Star network.***



### ***Advantages of a Star Network (topology)***

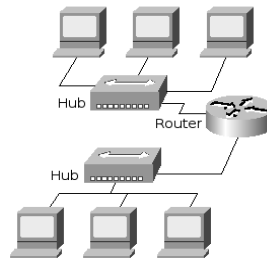
- i. Easy to install and wire
- ii. No disruptions to the network when connecting or removing devices
- iii. Easy to detect faults and to remove parts.
- iv. Reliable market proven system
- v. System can be implemented in the hub/switch

### ***9. Distinguish between a router, switch, hub and a bridge.***

#### **Answer**

##### ***Routers***

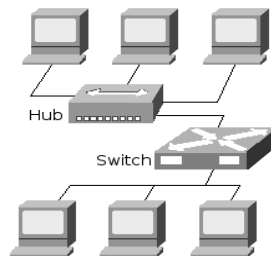
A router translates information from one network to another to prevent head-on collisions, and is smart enough to know when to direct traffic along back roads and shortcuts. For Internet connection a router is used as a translator. They are capable of collecting and storing information on where to send packets, based.



***Two networks connected via a router***

##### ***Switch***

A switch provides a central connection point for cables from workstations, servers, and peripherals.



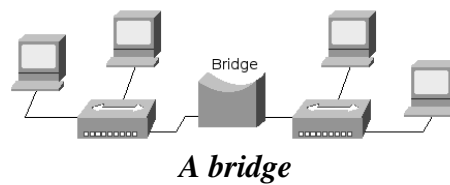
***A basic network with a hub and switch***

##### ***A hub***

Basically, a hub is a box with lots of connections (sockets) for Ethernet cables. The hub repeats all messages it receives to all connected nodes, and these nodes filter out only the messages that are intended for them.

Hubs can be passive or active. A passive hub simply splits the incoming signal among all of the ports in the device. Active hubs retransmit the received signal into the other access ports.

A **bridge** is a device used to segment a large network into two smaller, more efficient networks.



**10. Differentiate between communication and telecommunication. List the 3 basic elements of a telecommunication system**

Answer

### **Communication**

The transmission of data and information between two or more computers using a communication channel such as telephone line is called communication.

### **Telecommunication**

Telecommunication is the transmission of signals over a distance for the purpose of communication. Today, telecommunication is widespread and devices that assist the process, such as the television, radio and telephone, are common in many parts of the world.

The three (3) basic elements of a telecommunication system are:

- a. a transmitter that takes information and converts it to a signal for transmission,
- b. a transmission medium over which the signal is transmitted,
- c. a receiver that receives and converts the signal back into usable information

**11. What are the positive and negative effects of modern technologies on communication?**

Communication is the transmission of data and information between two or more computers using a communication channel such as a telephone line.

### Effects

It has changed the way people:

- v. interact
- vi. do business
- vii. learn and
- viii. socialize.

Telecommunication technologies are heavily used on the internet and other services as E-mail & the Web are provided.

*Negative effects*

- iv. Pornography
- v. Computer crime
- vi. Piracy etc

**12. What is a telecommunication network? Give 3 examples of a telecommunication network.**

*A telecommunications network is a network of telecommunications links and nodes arranged so that messages may be passed from one part of the network to another over multiple links and through various nodes.*

Examples:

- i. Computer network
- ii. the Internet
- iii. the Public switch telephone network



## ***THE INTERNET***

### SECTION A

- 1) An application program which interprets HTML is called a ..... ***Web browser*** .....
- 2) On the Internet ... ***Search engines*** ... help users to find sites related to a particular topic.
- 3) HTML stands for ..... ***Hypertext Markup Language*** .....
- 4) The abbreviation HTTP stands for ..... ***Hypertext Transfer Protocol*** .....
- 5) The abbreviation CBT stands for ... Computer-Based Training or Computer-based tutor ...
- 6) The abbreviation URL stands for ..... ***Uniform Resource Locator*** .....
- 7) The website address for CNN is ..... ***www.cnn.com*** .....
- 8) To have access to the web in the classroom, you need access to the ... ***Internet*** .....
- 9) The abbreviation FTP stands for ..... ***File Transfer*** Protocol .....
- 10) Software used to view web pages are called ..... .. ***Web browser*** .....
- 11) An interface software used to explore the Internet is called a ..... ***web browser*** .....
- 12) A browser is a piece of software used to read..... ***Web pages*** .....
- 13) The opening page on a website is called a ..... ***homepage*** .....
- 14) Connection to the Internet using the telephone line is called..... ***Dialup connection*** .....

Circle as T (true) or F (false) in the spaces provided below

15	The most obvious signs of the growth of Electronic Fund Transfer is ATM.	<input checked="" type="radio"/> T	<input type="radio"/> F
16	The Internet itself does not contain information.	<input checked="" type="radio"/> T	<input type="radio"/> F
17	The first country to have internet in Africa is Ghana.	<input type="radio"/> T	<input checked="" type="radio"/> F
18	The internet itself does contain information.	<input type="radio"/> T	<input checked="" type="radio"/> F
19	The Internet Service Provider enables the users to send e-mail only	<input type="radio"/> T	<input checked="" type="radio"/> F
20	The abbreviation URL stands for Universal Resource Location	<input type="radio"/> T	<input checked="" type="radio"/> F
21	A server accepts requests and does nothing about it	<input type="radio"/> T	<input checked="" type="radio"/> F
22	Cyber crime is the negative impact of the Internet	<input checked="" type="radio"/> T	<input type="radio"/> F

## SECTION B

**1. Dialup connection is the simplest way of getting access to the Internet. List the equipment needed and explain clearly how one can get connected.**

### SOLUTION

There are four main components to getting connected to the Internet:

- i. PC,
- ii. Modem,
- iii. telephone line &
- iv. a browsing software

### Getting Connected

- i. Contact the Internet Service Provider (ISP)
- ii. ISP will create an account for you on a mail server
- iii. ISP will then configure your system for the dialup service and test it
- iv. You can now receive and send mails through the mail server.

**2. Dialup connection is the simplest way of getting access to the Internet. List the equipment needed and software needed. Describe the role of each equipment as clearly as you can.**

### SOLUTION

There are four main components to getting connected to the Internet:

- i. PC,
- ii. Modem,
- iii. telephone line
- iv. browsing software

PC: This houses all the communication software required for dialup connection.

Modem: This converts digital to analog signal for the telephone line.

Telephone line: This acts as a carrier for the data.

Browser: This allows the user to connect to the server, compose the mail and finally send the mail to the recipient and allow the user to receive mails.

**3. Write briefly on the e-mail (Provide at least 5 unique sentences).**

- i. E-mail is the most popular service that the Internet provides.
- ii. It is the electronic version of the normal mail (snail mail), except it takes a few minutes instead of a few days to be delivered.
- iii. E-mail has become a primary communication method for both personal and business use.
- iv. It enables everyone to communicate with millions of Internet users all over the world.
- v. E-mail tends to have a more conversational style than conventional mail, and therefore formalities of letter writing, and spelling/grammar are less important.
- vi. E-mail is 24/7 in a day and week respectively
- vii. E-mail is cheaper than ordinary mail

viii. E-mail is faster than the ordinary mail.

**4. The advantages of e-mail are (i) ease of use (ii) speed and (iii) reliability. Explain these.**

- i. Easy to use: E-mail helps send mail quickly, maintain mail history, store the required information, and manage contacts.
- ii. Speed: E-mail is delivered instantly anywhere across the globe. No other service matches the e-mail in terms of speed. Can be automated using auto-responders.
- iii. Reliability: E-mail reaches the recipient most of the time. If the message doesn't reach its destination the first time, the mail server sends it again. If the message is not delivered, usually a message is sent to the sender explaining the problem.

**5. What is difference between the Internet and WWW?**

Answer

The Internet and the Web are two separate but related things.

The Internet is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of languages known as protocols.

The World Wide Web, or simply Web, is a way of accessing information over the medium of the Internet. It is an information-sharing model that is built on top of the Internet. The Web uses the HTTP protocol, only one of the languages spoken over the Internet, to transmit data.

**6. a) What is the internet?  
b) Identify 5 uses of the internet**

Answer

- a) The internet is a global “net work of networks” used to communicate electronically that is linked by a common set of protocols. These protocols allow computers from one network to communicate with computers on another network.

OR

The internet is a set of interconnected networks which allow computers in different locations to exchange information. The internet includes services such as the world wide web, e-mail, file transfer protocol (FTP) any many mor

- b)
  - i. Research (information) etc.
  - ii. Education or e-learning
  - iii. Communication (i.e. emailing, chatting etc)
  - iv. Business transaction & shopping
  - v .Entertainment e.g. movies, music & games

**7. Explain the following terms as used in communication: i. simplex ii. Half-duplex iii. Full-duplex**

- i. Simplex transmits in one direction only. It can only send or receive but not both, e.g. TV can only receive broadcast signals but cannot send out signals.
  - ii. Half-duplex allows transmission in either direction but alternatively, i.e. it can send and receive but not at the same time, e.g. telephone.
  - iii. Full-duplex allows transmission in both directions simultaneously. Signals can travel in both directions at the same time.
- (Try and include the diagram for each communication design)

***MULTIMEDIA IN THE CLASSROOM***

***SECTION A***

- 1) Using more than one type of media element at the same time is called... ***Multimedia*** ...
- 2) Objects in multimedia applications are selected by ..... ***clicking*** .....
- 3) In multimedia the movement of text, graphics and images is called... ***Animation*** .....
- 4) The use of computers to integrate and present information using a combination of media elements is called ..... ***multimedia*** .....
- 5) Computer-based training is a tool for teaching and ..... ***learning*** .....
- 6) A digital version of the regular books is called..... ***Electronic book or E-book*** .....
- 7) A computer-based training that uses web technology is called..... ***Web-based training*** .....
- 8) Drill & Practice software is an example of ... ***Computer-Assisted Instruction (CAI) software*** ...
- 9) The most vital storage medium for multimedia is the ..... ***DVD-ROM*** .....
- 10) A standard for compression & decompression is called..... ***MPEG*** .....
- 11) Name any 2 examples of graphics..... ***drawing/chart/photo/picture or image*** .....
- 12) Sounds are captured using microphones, ..... ***tape or CD player etc*** .....
- 13) The movement of text, graphics, and images is called ... ***animation*** .....
- 14) The act of responding to questions posed by multimedia systems is called.. ***Interactivity*** .
- 15) A computerized information centre that provides specific information to users is called ... ***information kiosk*** .....
- 16) MPEG is a standard for compression and ..... decompression .....

Circle as T (true) or F (False) in the spaces provided below.

17	Interactivity in multimedia makes the student part of the learning process	<input checked="" type="radio"/> T	<input type="radio"/> F
18	The act of responding to questions on multimedia systems is called interactivity	<input checked="" type="radio"/> T	<input type="radio"/> F
19	Most multimedia applications are interactive	<input checked="" type="radio"/> T	<input type="radio"/> F
20	Multimedia software refers to any computer-based presentation	<input checked="" type="radio"/> T	<input type="radio"/> F
21	Multimedia software cannot be used as productivity software	<input type="radio"/> T	<input checked="" type="radio"/> F
22	Interactivity does not make the student part of the learning adventures	<input type="radio"/> T	<input checked="" type="radio"/> F
23	In multimedia applications, most objects are not clickable	<input type="radio"/> T	<input checked="" type="radio"/> F
24	Simulation is not an application of multimedia in Education	<input type="radio"/> T	<input checked="" type="radio"/> F
25	Text, graphics, and images that have the illusion of motion is known as animation	<input checked="" type="radio"/> T	<input type="radio"/> F
26	Text is used in multimedia to convey information	<input checked="" type="radio"/> T	<input type="radio"/> F
27	An example of electronic books is Microsoft Encarta	<input checked="" type="radio"/> T	<input type="radio"/> F

## SECTION B

### 1) What is meant by the terms (i) text and (ii) graphics in multimedia applications?

- a. **Text** consists of characters that are used to create words, sentences, and paragraphs and is the fundamental element used in all multimedia applications. Many multimedia applications use text-based menu that allow the selection and display of information. When we speak, we use text, and when we write we use text.
- b. **Graphics**: - A graphic is a digital representation of non-text information such as drawing, chart or photograph. It is called picture or image and contains no movement or animation. Graphics can illustrate certain concepts more vividly than text and therefore play an important role in teaching and learning. Most people retain a higher percentage of materials they see graphically. Most software applications used today are graphic based.

### 2) What are the terms (i) multimedia (ii) interactive multimedia?

- a. **Multimedia** is any combination of text, graphic art, sound, animation, and video delivered to users by a computer or other electronic means.
- b. Most multimedia applications are interactive and hence they allow the user to choose what they want and define the order for presentation. The user then receives feedback on the action.

**3) Write short notes on computer graphics.**

- i. Graphics are digital representation of information other than text.
- ii. Examples include drawing, chart, photograph, pictures or image.
- iii. Some of these contain no movements or animation
- iv. Graphics can illustrate certain concepts more vividly than text and therefore play an important role in teaching and learning.
- v. Most people retain a higher percentage of materials they see graphically
- vi. Most software applications used today are graphic based.

**4) Differentiate between the following media elements: text, graphics & audio.**

- a. Text consists of characters that are used to create words, sentences, and paragraphs and is the fundamental element used in all multimedia applications. Many multimedia applications use text-based menu that allow the selection and display of information.
- b. Graphics: - A graphic is a digital representation of non-text information such as drawing, chart or photograph. It is called picture or image and contains no movement or animation. Graphics can illustrate certain concepts more vividly than text and therefore play an important role in teaching and learning. Most people retain a higher percentage of materials they see graphically. Most software applications used today are graphic based.
- c. Audio: - Audio is digitized music, speech or sound that is produced by a computer. The use of audio together with text and graphics enhances the understanding of concepts. They are human voices, instrumental notes, natural sound and many more.

**5) What is meant the term Computer-Assisted Instruction (CAI) or Instruction Software?**

***Give one example.***

- i. It is software that helps teach, by using the computer to assist the instructional process.
- ii. It teaches specific skills & knowledge based on specific content area and level.
- iii. CAI software addresses many different instructional roles with a specific content focus.
- iv. Examples: tutorials, drill & practice, simulation, games etc.
- v.

**6) Write short notes on Computer-Based Training (CBT) & Web-Based Training (WBT)**

- a. CBT is an interactive instructional approach in which the computer provides a series of stimuli to the student ranging from questions to be answered to choices or decisions to be made. The CBT then provides feedback on the student's response. It is the use of the computer as a teaching machine to deliver instructions.
- b. WBT is a form of computer-based training in which the training material resides on the web and pages are accessible through the World Wide Web. Typical media elements used are text and graphics including animation, audio and video.

**7. Explain why multimedia is important in Education.**

- i. It is an ideal platform for advanced forms of learning and training.
- ii. Provides a high degree of interactivity – essential for active learning
- iii. Multimedia appeals to a variety of learning styles.
- iv. Helps overcome linguistic, cultural, and physical barriers
- v. Helps in addressing different learning levels
- vi. Helps in presenting materials in different formats and from different perspectives

**8. Explain why you would use multimedia in teaching and training.**

- i. It is an ideal platform for advanced forms of learning and training.
- ii. Provides a high degree of interactivity – essential for active learning
- iii. Multimedia appeals to a variety of learning styles.
- iv. Helps overcome linguistic, cultural, and physical barriers
- v. Helps in addressing different learning levels
- vi. Helps in presenting materials in different formats and from different perspectives

**9.. What facilities on PowerPoint make it useful for multimedia presentation?**

- a. The program comes with instant layouts, on-screen directions and tool tips to help make compelling multimedia presentations.
- b. Information is displayed in the form of slides that contain text, graphics, sound and animation. Objects can be incorporated from clip art images, pictures, video and audio clip. You can add timing and also re-arrange the slides.

***10. Explain why Microsoft PowerPoint can be used for Multimedia.***

- c. PowerPoint is a presentation tool for all ages. It enables users to turn ideas into powerful presentations. The program comes with instant layouts, on-screen directions and tool tips to help make compelling multimedia presentations.
- d. Information is displayed in the form of slides that contain text, graphics, sound and animation. Objects can be incorporated from clip art images, pictures, video and audio clip. You can add timing and also re-arrange the slides.

***10. What are texts? In general how is text used? How useful is text in multimedia?***

- i. Text consists of characters that are used to create words, sentences, and paragraphs and is the fundamental element used in all multimedia applications.
- ii. In general , when we speak , we use words and when we write we use words
- iii. Text is used in multimedia applications t convey information. They are also given different colour, style and font size to emphasize certain words or phrases. Some multimedia applications used text-based menus.



## ***EDUCATION & TECHNOLOGY INTEGRATION***

### **SECTION A**

- 1) To integrate technology in the classroom, you need a Personal Computer and a .....  
**Projector**.....
- 2) The most common barriers to technology integration is training and ... **Resources** .....
- 3) Educational Technology is the application of technology in teaching and .... **learning**

***Circle as T (true) or F (False) in the spaces provided below.***

4	To integrate technology, the teacher must adopt new teaching tools	<b>T</b>	<b>F</b>
5	Technology integration can take place without computers and software	<b>T</b>	<b>F</b>
6	Only ICT tutors need to integrate technology into the classroom	<b>T</b>	<b>F</b>
7	For a successful integration, the teachers must change the way they teach	<b>T</b>	<b>F</b>
8	To integrate software into the curriculum one needs to evaluate the software	<b>T</b>	<b>F</b>
9	Curriculum enables pupils to adapt a positive attitude to learning	<b>T</b>	<b>F</b>
10	One barrier to technology integration is the availability of infrastructure	<b>T</b>	<b>F</b>
11	One example of innovation through educational technology is projections	<b>T</b>	<b>F</b>
12	To integrate technology into teaching there is no need to plan	<b>T</b>	<b>F</b>
13	Voice synthesis ensures that computers communicate with humans verbally	<b>T</b>	<b>F</b>
14	Technology has no impact on other curriculum areas	<b>T</b>	<b>F</b>
15	Changing instructional strategy is to select appropriate materials and tools	<b>T</b>	<b>F</b>

### ***SECTION B***

***1) List five (5) barriers to technology integration in the classroom.***

- a. Lack of teacher training,
- b. Lack of administration support,
- c. Limited time for teacher planning,
- d. Budget constraints and
- e. Basic resistant to change by many educators

***2) List five (5) barriers to teaching information technology in the training colleges.***

- a. Lack of teacher training,
- b. Lack of administration support,
- c. Limited time for teacher planning,

- d. Budget constraints and
- e. Basic resistant to change by many educators

**3) Explain the term technology integration**

- ✓ Technology is scientific methods used in a particular field.
- ✓ Integration: - bringing all parts together to combine into a whole.
- ✓ Technology Integration: - Technology integration is the combination of hardware, software and each subject area of the curriculum to enhance teaching and learning.

## ***PRODUCTIVITY & SOFTWARE APPLICATIONS II***

### ***SECTION B***

- 1) a) What is spreadsheet software?**
- b) List 4 features of spreadsheet software**
- c) Give two examples of spreadsheet software**

Spreadsheet software is application software that is used to work with numbers, performing calculations and creating graphs. A spreadsheet is a rectangular table (or grid) of information, often financial information

Features of spreadsheet software

- ❖ Workbooks
- ❖ Worksheets
- ❖ Rows
- ❖ Columns
- ❖ Cells
- ❖ Ranges
- ❖ Text, numeric & formula entries
- ❖ Functions
- ❖ Charts
- ❖ Recalculation
- ❖ What-if analysis

### ***Examples of spreadsheet software***

- i. Microsoft Excel
- ii. Corel Quattro Pro
- iii. Lotus 1-2-3
- iv. Apple works
- v. Claris Works

- 2) a) *What is DBMS software?*  
b) *List 4 features of DBMS software*  
c) *Give two examples of DBMS software*

A database management system (DBMS) is a software program that creates databases and then manipulates data in them. It can also be defined as a program that sets up, or structures, a database and provides tools to enter, edit, and retrieve data from the A collection of related information is called a Database

***Features of DBMS software***

- Sorting tool
- Primary key (field)
- Tables
- Queries
- Forms
- Reports
- Filters etc.

***Examples of DBMS software***

- ✓ *Microsoft Access*
- ✓ *Corel Paradox*
- ✓ *Lotus Approach*
- ✓ *MySQL*
- ✓ *Oracle*
- ✓ *SyBase*

- 3) a) *What is Graphics software?*  
b) *List 4 features of Graphics software*  
c) *Give two examples of Graphics software*

Graphics software is application software that is used to create and edit photos and images.

**Examples of graphics software**

- i. Microsoft Publisher
- ii. Adobe PageMaker
- iii. Corel Draw
- iv. Macromedia Freehand

***Common tools & features of Graphics software***

- i. Image window
- ii. Tool box
- iii. Pens & brushes
- iv. Colour palettes
- v. Text editing
- vi. Saves graphics in a variety of formats.



***N/B***

***For questions on PRACTICALS, always attend classes.***

## MULTI-CHOICE OBJECTIVE TEST QUESTIONS

1. Digital cameras use \_\_\_\_ or other types of miniature storage media.
  - a. floppy disks
  - b. CDs
  - ☒ c. memory cards
  - d. Zip® disks
2. Cellular radio and \_\_\_\_ are examples of wireless transmission media.
  - ☒ a. satellites
  - b. cables
  - c. telephone lines
  - d. all of the above
3. Because computers are becoming more a part of daily living, many people believe that \_\_\_\_ is vital to success.
  - ☒ a. computer literacy
  - ☐ b. computer processing
  - ☐ c. computer competency
  - ☐ d. computer programming
4. The computers on a network, called \_\_\_\_ or workstations, request resources.
  - ☐ a. servers
  - ☐ b. workgroups
  - ☒ c. clients
  - ☐ d. mainframes
5. A(n) \_\_\_\_ allows users to create an online photo album and store electronic photographs for free.
  - a. chat room
  - b. online service
  - c. discussion board
  - ☒ d. photo community
6. A collection of related Web pages is called a(n) \_\_\_\_.
  - a. Web community
  - ☒ b. Web site
  - c. chat room
  - d. online service

7. *Using software is known as \_\_\_\_ the software.*  
a. installing  
**b. running**  
c. loading  
d. executing
8. *A small image that represents a program, an instruction, or some other object is called a(n) \_\_\_\_.*  
a. utility program  
b. shortcut  
**c. icon**  
d. GUI
9. *The use of computers to assist with manufacturing processes such as fabrication and assembly is called \_\_\_\_.*  
a. telemedicine  
**b. computer-aided manufacturing (CAM)**  
c. onboard navigation  
d. distance learning
10. *Customers can place orders, make payments, and access the Web using freestanding computers called \_\_\_\_.*  
a. mainframes  
**b. kiosks**  
c. workstations  
d. Tablet PCs
11. *Midrange servers were previously known as \_\_\_\_.*  
a. mainframe computers  
**b. minicomputers**  
c. PDAs  
d. workstations
12. *An access provider that provides Internet access to a specific geographic area is called a(n) \_\_\_\_.*  
a. national ISP  
b. online service provider  
**c. regional ISP**  
d. wireless service provider
13. *The special window that provides information, presents available options, or requests a response is called a \_\_\_\_.*  
a. title bar  
b. shortcut menu

***Update Your Knowledge***

- i. What are the two basic network configurations? ..... and .....
- ii. A primary reason for implementing a network is to .....resources.
- iii. In a Peer-to-peer network, each computer can act as a ..... and a .....
- iv. Network professionals use the term ..... to refer to the network's physical layout.
- v. The four basic topologies are ..... , ....., ..... and .....topologies
- vi. In a .....Topology, all segments are connected to a centralized component called .....
- vii. The most reliable as well as the most expensive topology to install is the ..... topology

**Answers**

- i) Peer-to-peer & Server-based networks
- ii) Share
- iii) Server & client
- iv) Topology
- v) Bus, ring, star & Mesh
- vi) Star – hub
- vii) Mesh

**Some Past Questions On Excel (Spreadsheet)**

**SECTION A**

- 1) When you enter a formula in an Excel cell you start with a(n).....  
Answer:       equal to sign
- 2) The correct reference to the cell located in Column C and Row 41 is .....  
Answer:       C41

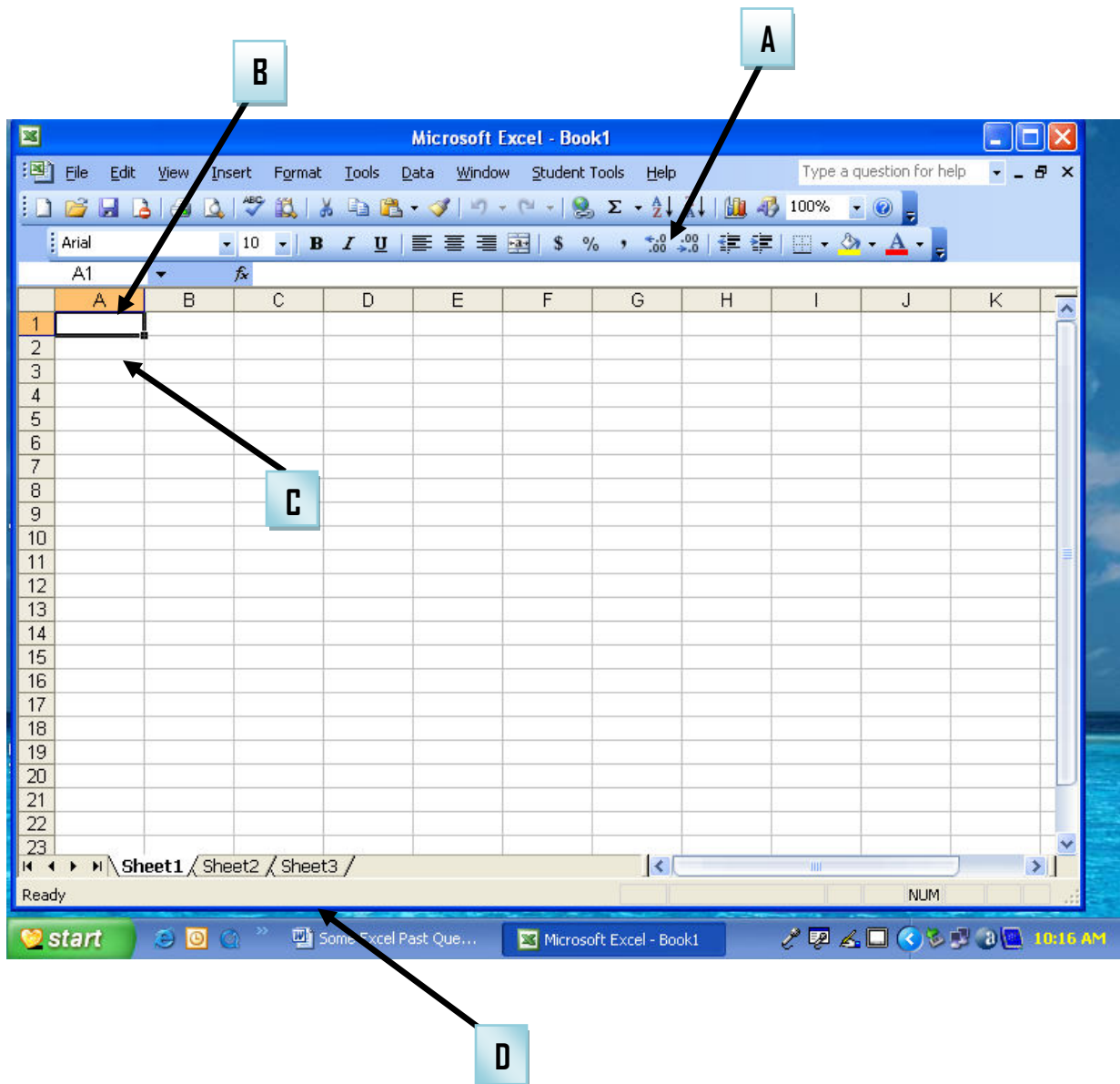
Circle as T (true) or F (False) in the spaces provided below.

3	Excel spreadsheet can use formulas for calculations	<input checked="" type="radio"/> T	<input type="radio"/> F
4	Excel spreadsheet does not allow the insertion of a picture.	<input type="radio"/> T	<input checked="" type="radio"/> F
5	Excel spreadsheet does not allow a formula to be entered in a cell.	<input type="radio"/> T	<input checked="" type="radio"/> F
6	Excel spreadsheet displays an error message if you enter an incorrect formula.	<input checked="" type="radio"/> T	<input type="radio"/> F
7	Excel spreadsheet does not allow a number to be entered in a cell.	<input type="radio"/> T	<input checked="" type="radio"/> F
8	The enter key cannot be used in the spreadsheet.	<input type="radio"/> T	<input checked="" type="radio"/> F
9	An example of database software is Microsoft Word.	<input type="radio"/> T	<input checked="" type="radio"/> F
10	Excel updates results automatically if the data in reference cells has changed formula and a reference to another cell.	<input checked="" type="radio"/> T	<input type="radio"/> F
11	MS Excel document cannot be exported into MS 'Word	<input type="radio"/> T	<input checked="" type="radio"/> F
12	An example of Database software is MS PowerPoint	<input type="radio"/> T	<input checked="" type="radio"/> F
13	MS Access can be used for queries	<input checked="" type="radio"/> T	<input type="radio"/> F

(June/July 2006)

*From the following list, name the four elements indicated in the diagram of the Excel Workbook Window (2 marks each)*

*Formula bar, AutoSum button, Paste Function button, Active cell, Toolbar, Sheet tab, Sort button, Name box*



14. A = Sort button

15. B= Name box.

16. C= Active Cell

17. D= Sheet tab



*In the work sheet below, use standard Excel functions to find the following*

No.	A	B	C	D	E
1	<u>Type ID</u>	<u>Description</u>	<u>Retail</u>	<u>Quantity</u>	<u>Value</u>
2	B3	Rack	¢25.30	50	
3	C5	Screw	¢65.10	10	
4	D5	Ladder	¢120.30	5	
5	D6	Grinder	¢45.40	300	
6	E7	Drill	¢35.99	15	
7			Average	Count	Total

a) Average retail price for column C (Cell C7). Write the formula below.

C7= Average (C2:C6)

b) Find the Total value for the column E (Cell E7). Write down the formula below.

E7 = SUM (E2:E6)

Where E2 = C2\*D2

E3 = C3\*D3

E4 = C4\*D4

E5 = C5\*D5

c) Number of items which have quantity less than 100 (Cell D7). Using COUNTIF (), write down the formula below.

D7 = COUNTIF (D2:D6, '< 100')

June/July 2006 (Re-sit)

*In the work sheet below, use standard Excel functions to find the following*

No.	A	B	C	D	E
1	Type ID	Description	Retail	Quantity	Value
2	B3	Rack	¢25.30	500	
3	C5	Screw	¢65.10	100	
4	D5	Ladder	¢120.30	150	
5	D6	Grinder	¢45.40	300	
6					
7			Average	Count	Total

a) Average retail price for column C (Cell C7). Write the formula below.

C7 = AVERAGE (C2:C5)

b) Complete the formulae for the following cells as shown below.

- a.  $E2 = C2 * D2$
- b.  $E3 = C3 * D3$
- c.  $E4 = C4 * D4$
- d.  $E5 = C5 * D5$

c) Find the Total value for the column E (Cell E7). Write down the formula below.

$$E7 = \text{SUM} (E2:E5)$$

June/July 2007

Use the spreadsheet below to answer the questions that follow.

No.	A	B	C	D	E
1	Name	Quiz 1 (30)	Quiz 2 (30)	Total	Percentage
2	James Bond	22	15		
3	Ali Jarrah	27	18		
4	John Peters	13	28		
5	Average				

a) Provide below a formula for calculating the total in cell D2 above.

$$D2 = B2 + C2$$

b) Provide below a formula for calculating the average in cell B5 above.

$$B5 = \text{AVERAGE} (B2:B4)$$

c) In cell E2 write down a formula for determining the percentage.

$$E2 = (D2/60) * 100$$

RE-SIT OCTOBER 2007

The figure below is a pro-forma invoice received from KERMA Carpet Ltd

No.	A	B	C	D	E
1	Description	Quantity	Unit Price	Amount	
2	Curtain Fabric	36	75,000		
3	Tape	25	18,000		
4	Accessories	13	160,000		
5			TOTAL		
6			VAT		
7			NHIL		
8			Total Tax		

a) Provide below a formula for calculating the VAT in cell D6 above (VAT is 12.5%).

$$D6 = 0.125 * D5 \quad \text{OR} \quad D6 = (12.5/100) * D5$$

b) Provide below a formula for calculating the NHIL in cell D7 above (NHIL is 2.5%).

$$D7 = 0.025 * D5 \quad \text{OR} \quad D7 = (2.5/100) * D5$$

c) In cell D8 write down a formula for determining the Total Tax to be paid. 5 marks

$$D8 = D6 + D7$$

**June/July 2008 (regular)**

No.	A	B	C	D	E
1	Items	Cost (Cedi)	Cost (Ghana New Cedi)	Quantity	Total (Ghana new cedi)
2	Car	22,000,000		30	
3	Tubeless Neck	27,678		24	
4	Car Engine	13,500,000		15	
5	Average				

a) Provide below a formula for calculating the amount in cell C2 below

$$C2 = B2/10,000$$

b) Provide below a formula for calculating the average in cell B5 below

$$B5 = \text{AVERAGE} (B2:B4)$$

c) In cell E2 write down a formula for determining the Total

$$E2 = C2 * D2$$

**September 2008 (sandwich)**

The worksheet below is a shopping list. Write formulas using arithmetic operations and standard Excel functions to find the following:

No.	A	B	C	D	E
1	Name	Category	Cost Per Item	No. of Items	Total Cost
2	Watermelon	Food	\$5.50	2	\$11.00
3	Books	Other	\$10.95	3	\$32.85
4	Bread	Food	\$3.00	1	\$3.00
5	Meat	Food	\$25.00	1	\$25.00
6	Blank CD	Other	\$2.00	10	\$20.00
7					

- a) Write a formula you would enter in cell E2 to calculate the total cost

$$E2 = C2 * D2$$

- b) Write a formula you would enter in cell E7 to compute the total cost of all products

$$E7 = \text{SUM} (E2:E6)$$

- c) Write a formula you would enter in cell C7 to compute the average cost of a single item.

$$C7 = \text{AVERAGE} (C2:C6)$$

- d) Write a formula you would enter in cell D7 to compute the total number of food items in column D.

$$D7 = \text{SUM} (D2:D6)$$

**REGULAR (JULY 2009)**

*In the worksheet below use Standard Excel Functions to answer the questions that follow.*

	A	B	C	D
1	Items	Cost (Ghana New Cedi)	Quantity	Total (Ghana New Cedi)
2	Car	2,200	30	???
3	Tubeless Neck	4,000	24	
4	Car Engine	500	15	
5	Average	???		
6	Total Cost of all items			???

- a) Provide below a formula for calculating the average quantity for cell B5.

$$B5 = \text{AVERAGE} (B2:B4), B5 = \text{AVERAGE}(C2:C4)$$

- b) In cell D2, write down a formula for determining the Total Cost in GH¢

$$D2 = B2 * C2$$

- c) Provide below a formula for calculating the total cost of all items for cell D6 below.

$$D6 = \text{SUM} (D2:D4)$$

**JANUARY 2010 (UTDBE)**

The worksheet below is a shopping list. Write formulas using arithmetic operations and Standard Excel Function to find the following.

	A	B	C	D	E
1	NAME	CATEGORY	COST/ITEM	NO. OF ITEMS	TOTAL COST
2	Watermelon	Food	GH¢5.50	2	GH¢11.00
3	Books	Other	GH¢10.95	3	GH¢32.85
4	Bread	Food	GH¢3.00	1	GH¢3.00
5	Meat	Food	GH¢25.00	1	GH¢25.00
6	Blank CD	Other	GH¢2.00	10	GH¢20.00
7					

a) Provide below a formula for calculating the total in cell E2 below.

$$E2 = C2 * D2$$

b) Provide below a formula for calculating the total cost of all products in cell E7 below.

$$E7 = \text{SUM} (E2:E6)$$

c) In cell C7, write down a formula for determining the average cost of a single item.

$$C7 = \text{AVERAGE} (C2:C6)$$

**JANUARY 2010 (SANDWICH)**

The worksheet below is a shopping list. Write formulas using arithmetic operations and Standard Excel Function to find the following.

	A	B	C	D	E
1	NAME	CATEGORY	COST/ITEM	NO. OF ITEMS	TOTAL COST
2	Watermelon	Food	GH¢5.50	2	GH¢11.00
3	Books	Other	GH¢10.95	3	GH¢32.85
4	Bread	Food	GH¢3.00	1	GH¢3.00
5	Meat	Food	GH¢25.00	1	GH¢25.00
6	Blank CD	Other	GH¢2.00	10	GH¢20.00
7					

a) Provide below a formula for calculating the overall total in cell E7 below.

$$E7 = \text{SUM} (E2:E6)$$

b) Provide below a formula for calculating the lowest cost of all products in cell C7 below.

$$C7 = \text{MIN} (C2:C6)$$

c) Write down a formula for determining the total cost in cell E5

$$E5 = C5 * D5$$

## REGULAR (JULY 2010)

Given that Continuous Assessment and Exams Marks constitutes 40% and 60% respectively, use the spreadsheet below to answer the questions that follow.

	A	B	C	D	E	F	G
1	NAME	Assessment (40%)	Exams (60%)	Assessment (40%)	Exams (60)	Total Mark	Remark
2	James Bond	60	75	???	???		???
3	John Paul	70	55				
4	John Peters	80	60				

1. Provide below a formula for calculating the value in cell D2 below.

$$D2 = B2 * 0.4$$

2. Provide below a formula for calculating the value in cell E2 below.

$$E2 = C2 * 0.6 \dots\dots\dots$$

3. Write down a formula to display the comment 'PASS' or 'FAIL' if the pass mark is 50 for cell G2.

$$G2 = \text{IF} (F2 \geq 50, \text{'PASS'}, \text{'FAIL'})$$