**MARKING SCHEME.**

**451/1**

**COMPUTER STUDIES**

**FORM TWO**

**2 HOURS**

***Kenya Certificate of Secondary Education***

**FORM TWO TERM ONE 2023**

**INSTRUCTIONS TO CANDIDATES:**

|  |  |  |
| --- | --- | --- |
| **QUESTIONS** | **MAX SCORE** | **Score** |
| **A** | 100 |  |

***This paper consists of 8 printed pages. Candidate should check to ascertain that all pages are printed as indicated and that no questions are missing.***

1. State **two** practices to be observed in order to ensure the safety of the computer user. (2marks)

* *Computer room should be well lit to avoid eye strain*
* *Avoid over bright wall paints that reflect too much light causing eye strain*
* *Adjust brightness of the computer monitor until the eyes feel comfortable before using the*
* *computer*
* *Use/fit the monitor with radiation filter screens*
* *Avoid using flickering monitor*
* *Seat for the user must be comfortable and have a straight backrest that allows someone to sit*
* *upright*
* *Take frequent breaks while working with a computer*

1. State the function of the following keys on the computer key board (2marks)

(a) **Insert.** *Helps the user to insert or replace a character at the cursor position*

(b) **Delete**. *Delete characters from the cursor position from left to right*

1. Define portability as used in software selection. (1mark)

*Portability refers to whether a program can be copied or installed in more than one computer*

1. List **four** ways of acquiring software in an organization. (4marks)

* *In-house developed programs*
* *Vender off the-shelf software purchase through a vendor*
* *Open source*
* *Borrowing*
* *downloading*

1. Give **two** difference between CD-R and DVD-RW (4marks)

* *CD-R allows the data to be wriiten once and cannot be changed while DVD-RW allows the data to be written and erased severally*
* *CD-R has low storage of 700MB while DVD-RW has a large memory of 4.7GB*

1. How does an operating system manage computer memory (2marks)

* *Organize the main memory into blocks of sizes called partitions*
* *Assigns main memory storage partitions to data and instruction*
* *Access to data is given using addressing the partition*

1. List **four** factors to be considered when purchasing an operating system. (2marks)

* *Hardware configuration*
* *Basic design of the computer e.g. IBM, APPLE*
* *Applications intended for the computer*
* *User friendliness or HCI*
* *Processor type*
* *Ease of installation*
* *Available documentation*
* *Cost*
* *Network and security*
* *Number of users, processors it can support.*

1. A computer diskette in drive A has folders for **MEMOS** for an administrator. Each of these folders is labelled according to the relevant months. The secretary created the folders for each month’s memo for each of access. Study the table below

|  |  |  |
| --- | --- | --- |
| **MEMO 1** | **MEMO 2** | **MEMO 3** |
| Warning  Lateness  Assembly | Inaccuracies  Auditing  Fraud | Careless talk  Inefficient  Meeting |

* 1. Assuming that the secretary was working from a flash disk, draw the corresponding tree structure (6 marks)

A





MEMO1



Warning

Assembly

Lateness

MEMO1



MEMO1



Warning

Assembly

Lateness



Lateness

Warning

Assembly

* 1. The secretary wanted to create a folder to store a memo in Fraud folder. State the path for that folder. (2 marks)

*A:\MEMO2\Fraud*

* 1. Suggest how the secretary can ensure that the work in that flash disk is not spoilt. (1 mark)
     + *Don’t put heavy objects on top*
     + *Do not drop the diskette down*
     + *Don’t put near magnets*
     + *Don’t remove from drive when still being read/written*
  2. The content of the file is not viewed by any other person apart from her. (1 mark)
* *Use of password*
* *Encrypt data*
* *User level*

1. List **two** devices under the control of the operating system. (2 marks)

* *Input devices*
* *Output devices*
* *Storage devices*
* *Communication devices*
* *Processor*
* *Memory*

1. Differentiate between interrupt and deadline. (2 marks)

*An interrupt Occurs when an application program terminates or requests certain services from the* operating system while deadline *a technique that allows a user to schedule a job by time-of-day, week, month, or year\_*

1. Define the term scanning. (1 mark) *Is capturing of data from an object and converting it into digital format.*
2. Differentiate between freeware and shareware (2 marks)

*Freeware software is provided to its users free of cost while Shareware software is provided to its users free for a limited period of time after which software needs to be paid \_*

1. Explain the following basic operations of the machine cycle in the control unit (3 marks)
2. Fetching

*The process of obtaining a program instruction or data from main memory*

*ii.* Decoding

*This is the process of translating the instructions into commands that the computer understands.*

iii. Execution

*The process of carrying out the commands.*

1. Write the following acronyms if full (4 marks)

HDMI

*High Definition Multimedia Interface*

SATA

*Serial Advanced Technology Attachment*

PnP

*Plug and Play*

WORM

*Write Once Read Many*

1. Ministry of Lands prefers to use hard copy output over soft copy when handling documents for land matters. Give **two** reasons for this preference (2 marks)

* *One may want to scan, photocopy or fax a document*
* *One may need to read work away from a computer*
* *One may need to sign a document*
* *Hardcopies are important backups in case the softcopy gets corrupted/computer crashes.*

1. Differentiate between a word wrap and a text wrap (2 marks)

*Word wrap- this is a feature that automatically takes cursor to the next line if there is no sufficient space on the current line*

*Text wrap –this feature determine how text surrounds an object.*

1. Define the term visual display (2 marks)

*Visual display is the size of display which is measured in inches across the diagonal*

b) State **three** examples of flat panel display. (3 marks)

* *Liquid crystal displays (LCD)*
* *Electro luminescent (EL)*
* *Gas plasma*
* *Thin Film Transistor (TFT*

18. List **three** examples of system software. (3 marks)

* *operating system*
* *firmware*
* *utility software*
* *networking software*

1. Differentiate between alignment and indentation as used in word processor. (4 marks)

*Alignment is the positioning of texts relative to left, Centre and right of the margin while indentation is description of distance from left and right margin*

1. Outline **three** distinctions between a super computer and microcomputer. [3 marks]

* *Super computers are big in size while micro computers are small in size*
* *Super computer have high processing speed while micro have low processing speed*
* *Super computers have large storage capacity while micro computers have small storage capacity*
* *Super computers have large memory capacity while micro computers have small memory capacity*
* *Super computers are expensive while micro computers are less expensive*
* *Super computers emit a lot of heat while microcomputers emit less heat*
* *Super computers consume a lot of power while microcomputers consume less power*

1. State **four** features of fifth generation computers. [4 marks]

* *Uses artificial intelligence*
* *Has large storage capacity compared to 4th generations computer*
* *Has larger memory capacity compared to 4th generations computers*
* *Consumes lass power to 4th generation computers*
* *Small in size compared to 4th generation computers*

1. State **two** differences between function keys and numeric key pad keys of a keyboard. [4 marks]

* *Functional keys are found at the top most part of the keyboard while numeric keypad are found on the right of the keyboard*
* *Functional keys are used for tasks that occur frequently while numeric keypad keys are used to enter numeric data or as cursor movement and editing keys*
* *Accept examples*

1. List **three** differences between laser printer and a dot matrix printer. [3 marks]

|  |  |
| --- | --- |
| Laser printer | Dot matrix printer |
| *Slower* | *Faster* |
| *Noisy* | *Quiet* |
| *Ink ribbon* | *Ink Thermal* |
| *Cheap relatively* | *Relatively expensive* |

1. Name an input or output device used in the following tasks. (4 marks)

a). Capturing still images

*Digital camera/ scanner*

(b). Printing detailed architectural designs

*Plotter*

(c). Playing flight and driving games

*Joy stick*

(d). Capture data at ATM

*Magnetic strip reader*

1. What is the use of the search and replace feature in a word-processor. (2 marks)

*Search: Used to find a text and replace with synonym, correct or phrase instead of the original text*

1. Explain how a computer may be used in efficient running of a hospital. (2 marks)

* *By keeping records, diagnosis, research, transactions*

*(Look for enhancement or technology in the answer)*

1. (a). A shopkeeper of a small shop at Longisa has bought desktop computer to assist him in performing his business activities. He has been advised that before he can use it to work he has to install it with an operating system. State any **six** factors to consider when choosing the operating system. [6 marks]

* *Hardware configuration of the computer, e.g. RAM memory size, Hard disk capacity, type of processor.*
* *•Basic design of the computer – It is an IBM compatible, or apple computer?*
* *•Hardware compatibility*
* *•User (type of work to be done), i.e. the applications intended for the computer*
* *•User friendliness or human computer interface, i.e. it is command line based, Menu driven or graphical user interface?*
* *Portability*
* *User friendly*
* *Warranty*
* *Cost*
* *User needs*

1. a) With reference to disk management explain what is meant by the terms below.

**Defragmenting**

*Is rearranging scattered related files/ folders closer to each other on the surface of a storage unit.*

**Disk formatting**

*Process of preparing a new disk so that files can be stored on it*

**Disk partitioning**

***I****t is the process of dividing a large physical disk into 2 or more partitions/ volume* c). b) Give any **two** reasons that may make the shopkeeper to partition the computer disk. [2 marks]

* *To install more than one operating systems on the same disk*
* *For the purposes of backup on the same disk, so that if one partition fails the other will still be working*

1. State **two** properties that an operating system display about a file. [2mark]

* *size*
* *Date crated*
* *Extension*

1. State the function of drop cap in a document. (1 mark)

*Capturing the attention of a reader*

1. Describe **two** types of drop cap. (4 marks)

*In margin: all the lines start from the dropped character*

*Dropped: only the specified lines start from the dropped, the rest start from margin*

*(accept illustration)*

1. Give **three** classification of operating system. (3 marks)

*According to:*

*Task*

*User*

*Interface*