1. (a) Distinguish between **Primary Memory** and **Storage capacity** (02 marks)

*Primary memory is the part of the computer that stores current data, programmes, and instructions whereas Storage capacity refers to how much disk space one or more storage devices provides*

(b) Give two examples of Secondary storage devices (02 marks)

* *Hard drives (magnetic storage/SSD)*
* *Magnetic tape (magnetic storage)*
* *CD, DVD, and Blu-ray drives (Optical storage)*
* *USB/flash drive (solid state storage)*
* *Memory chip/SSD card (solid state storage*)

(c) Explain the meaning of the term **Reading** as used in computer storage (01mark)

***Reading*** *is the process of transferring data, instructions, and information from a storage medium into memory.*

1. (a) Mention the function of the following database components
2. Query (2 marks)

A Query is a request for information or data made by a user and written in a specific format

1. Forms (2 marks)

*A form is a database object that contains different fields for an individual entry.*

(b) Explain how **Default value** field property affect the data entry into a database

table. (01 mark)

Default Value automatically fills in a preset value in a database if no other input is provided

1. (a) Distinguish between Computer Servicing and Computer repair (02 marks)

*Computer repair refers to fixing of a total breakdown of hardware while Maintenance is the prevention of deterioration in the functionality of a hardware*

1. Explain how the following can protect devices in the Computer Laboratory
2. Uninterruptible Power Supply (02 marks)

*Provides continual power supply and provides automated backup electric power to a load when the input power source or mains power fails.*

1. Dust Blower (01 mark)

*Used when dirt needs to be removed from particularly hard-to-reach places in a computer system.*

1. (a) Differentiate between a **File** and a F**ile Extension** (02 marks)

*A file is a collection of bits that have been processed and stored in secondary memory while*

*a file extension is a suffix to the name of a file applied to indicate the file format*

(b) Study the path below and answer the questions that follow

D\Exams\End\List.xlsx

(i) Identify the file name (01 mark)

List

1. On which drive is the file located? (01 mark)

D

1. In which sub folder is the file located? (01 mark)

End

1. (a) Computer files can be transferred from one computer to another using different devices. Give three devices that can be used to transfer files. (02 marks)

* *Hard drives (magnetic storage/SSD)*
* *Magnetic tape (magnetic storage)*
* *CD, DVD, and Blu-ray drives (Optical storage)*
* *USB/flash drive (solid state storage)*
* *Memory chip/SSD card (solid state storage*)

(b) Hamza accidentally deleted his file from the Desktop. Advise him on any three methods he would employ to recover this file. (03 marks)

(i) *Right click and click undo*

*(ii)Restore the file from Recycle Bin*

*(iii) Use Data Recovery software*

1. (a) ICT professional users can undertake different forms of ICT related careers. Identify any five ICT related career opportunities in Uganda today. (05 marks)

* *Computer Scientist*
* *Computer Support Specialist*
* *Computer Systems Analyst*
* *Computer Systems Designer*
* *Computer Programmer*
* *Database Administrator*
* *Network Administrator*
* *Network System Analyst*
* *Software Engineer*

1. (a) Explain the concept of **Plug and Play** (PnP) as tool by an operating system. (2 marks)

This is a feature of a computer system by which peripherals are automatically detected and configured *by the operating system*

1. Mention any three reasons that would necessitate a computer user to upgrade an operating system. (3 marks)

* *Improved security.*
* *Access latest features.*
* *Better compatibility.*
* *Boosted device performance.*
* *Reduced costs.*
* *Vendor support.*
* *Increased productivity and efficiency*

1. (a) Define the term Application software. (2 marks)

*Application software is a type of software designed to perform specific tasks for end-users*.

(b) State one use of each of the following applications. (03 marks)

(i) Word Processor

*An application that is used in creating, storing, and printing text documents.*

(ii) Presentation Software

*Presentation software is used to create presentations which can communicate ideas and other information to a group of audience*.

(iii) Web browser

A web browser *is an application used for accessing websites*

1. (a) What is the World Wide Web? (2 marks)

*This refers to the global collection of linked electronic documents called Webpages stored on internet servers all over the world*

(b) The new lower Ugandan curriculum is mainly ICT integrated. Show three ways in which internet can facilitate the learning and teaching of the new lower curriculum

(03 marks)

* *Computer-Assisted Instructions (CAI), so that teachers can use computers and other IT equipment to present teaching materials in a more interesting way.*
* *Computer-Assisted Learning (CAL), so that students can use computers and appropriate* [*software*](http://www.csklsc.net/wong-sir/information_processing/educational_software.htm) *to learn at their own pace.*
* *Computer-Assisted Assessment (CAA), which may reduce the time and labor to mark the answer scripts.*
* *Distance learning through computer-based training and Web-based training.*
* *Simulations of experiments or real-life situations that may be hazardous.*
* *Electronic library system for searching, borrowing, and returning books.*
* *The School Administration and Management System (SAMS) for keeping records of students and producing report cards or other related documents.*
* [*Edutainment*](http://www.csklsc.net/wong-sir/information_processing/entertainment_software.htm)*, which is a type of* [*educational software*](http://www.csklsc.net/wong-sir/information_processing/educational_software.htm) *that combines education with entertainment*

1. (a) Social Networking platforms are increasingly used by people globally to disseminate information and for social interaction. Mention any three dangers of social networks.

(2 marks)

* *They are addictive.*
* *They are not regarded as formal*
* *In case one forgets his/her password, signing in is not possible and this can lead to loss of information.*
* *Social Networks may violate privacy in case someone else gets to know your user password.*
* *Misinterpretation: One has to be careful while posting any kind of information on social networks. If typed in a hurry, the matter could be misinterpreted.*
* *Junk Messages: Social Networks are used a lot to send unsolicited messages and unwanted advertisements.*
* *Computer viruses these can be downloaded and spread across machines and have destructive effects.*
* *unsuitable material such as Pornography.*
* *Privacy violation.*
* *The cost of using them is high*

(b) Write the following abbreviations in full

1. **URL** (01 mark)

Uniform Resource Locator

1. **VoIP** (01 mark)

Voice over Internet Protocol

1. Explain the following attributes of computers which make them dependable and reliable tools.
2. Diligence (02 marks)

*Computers have the ability to perform the same task “over and over” for a long time without getting bored.*

1. Artificial Intelligence (02 marks)

*They can be programmed to assume capabilities such as learning, reasoning, adaptation, and self-correction*.

1. Automation (01 mark)

*Computers do not need any supervision in order to perform programmed routine*

1. (a) Describe the term **Digital Divide** (02 marks)

*Digital divide refers to* *the gap between demographics and regions that have access to modern information and communications technology (ICT), and those that don't or have restricted access*

(b) Outline three ways **E-commerce** can help to improve businesses in the country today.

(03 marks)

* *Transactions can occur immediately and globally, thus save time for participants on both ends.*
* *Transactions can occur 24 hours per day.*
* *Businesses have access to millions of people with Internet connections.*
* *Businesses have the ability to gather customer information, analyze it, and react if appropriate.*
* *Information can be changed and be available quickly.*
* *Customers can compare prices easily.*
* *Feedback can be immediate.*
* *Manufacturers can buy and sell directly, avoiding the cost of the middleman.*
* *Distribution costs for information is reduced or eliminated.*

1. (a) Fill in the right extension for the following file (02 marks)
2. Audio file

M4A, FLAC, MP3, WAV, WMA, AAC.

1. Word Document

|  |  |
| --- | --- |
| docm |  |
| docx |  |
| dot |  |
| dotx |  |

1. List any three operations which can be performed on a file (03 marks)

**Create operation open operation write protect operation**

**Delete operation close operation rename operation**

1. (a) List any three Text input devices (03 marks)

* *Keyboard*
* *Handwriting recognition*
* [*Optical character recognition*](http://www.answers.com/main/ntquery?method=4&dsid=2222&dekey=Optical+character+recognition&curtab=2222_1)
* *Speech recognition*
* *Bar code readers*
* *MICR reader*

(b) Suggest any two causes of hardware failure (02 marks)

* (i) *Human error*
* *Firmware corruption*
* *Heat*
* *Water damage*
* *Power issues*

1. (a) Differentiate between **Buffering** and **Streaming** media (02 marks)

*Buffering is the process of placing data is an area of memory or storage in which data and information is placed while waiting to be transferred to or from an input or output device.*

(b) Explain the function of the following E-mail structures. (02 marks)

1. **BCC**

*Enables copies of the mail message to be sent to the third party without acknowledging other recipients.*

1. **To**

*Helps to accommodate the recipients’’ email addresses*

1. What does **SMTP** stand for? (01 mark)

*Simple Mail Transfer Protocol*

1. (a) Define the term **Networking** (02 marks)

*Networking is the process of connecting two or more computers with the purpose of transmitting, exchanging, or sharing data and resources.*

(b) Give any three examples of Networking Hardware (03 marks)

* *Network Interface Card*
* *Ethernet Cards*
* *Wireless Adapters*
* *Switches*
* *Repeaters*
* *Bridges*
* *Routers*
* *Firewalls*

1. (a) Outline any **three** threats an organization may face as a result of networking computers

(03 marks)

* *Virus infection*
* *Network failure*
* *Slow service*
* *Cost*
* *Expert support required*

(b) Suggest **two** measures that the organization can employ to reduce network threats

* *Install antivirus software.*
* *Create strong passwords.*
* *Enforce security policies.*
* *Use firewalls.*
* *Monitor activity.*

1. Explain the following terms as used in spreadsheets
2. Cell (2 marks)

* A cell is a rectangular area formed by the intersection of a column and a row.

1. Value (2 marks)

A value is a number to be used for calculations.

(b) Give one example of a logical function in spreadsheets (1 mark)

* IF
* AND
* OR
* NOT

1. Use the words below to answer questions (a) – (e) in the table (05 marks)

**Cryptographic utilities, Disk defragmenters, Debuggers, Disk partitioners, Uninstaller**

|  |  |
| --- | --- |
| **Utility** | **Function** |
| 1. Debuggers | Helps the computer to find out the error and fixes it. |
| 1. Disk partitioners | Divides an individual drive into multiple logical drives |
| 1. Cryptographic utilities | Encrypt and decrypt streams and files |
| 1. Uninstaller | Used to remove an application program and its associated attributes from the system. |
| (e) Disk defragmenters | Increase efficiency by moving data to one side of the disk. |

1. (a) Differentiate between **Simplex** and **Half duplex** communication methods (02 marks)

*Simplex refer to a method of transmitting data in one direction only with no response from the receiving device while Half duplex transmission allows data transmission in either direction, but only one way at a time*

(b) State three examples of wireless communication channels (03 marks)

(i*) Infrared*

*(ii) Radio waves*

*(iii) Microwave*

**END**