

1a) Distinguish between Random access memory (RAM) and secondary storage

RAM is the working area for the computer user that provides temporary storage for data, programs when the computer is running whereas secondary storage is a kind of storage that provides a relatively permanent for of storage for data and information when the computer is running or even when the computer is turned off.

b) Give an example of secondary storage.

*Floppy diskette
Magnetic tape
Zip disk
Jaz disks
Hard disk
Microfiche and microfilm*

*Compact disks (CD)
Digital video disks (DVD)
Memory cards
Smart cards
Flash disks*

2) Explain each one of the following database features.

a) Field name

Database feature assigned to each field to identify the different fields.

b) Field properties

*Determine how data is handled, stored and manipulated
Further define data types and formats like field size, default values*

c) Data type

Specify the kind of data a field can contain and how the field is used.

3a) Distinguish between computer servicing and computer repair

Computer servicing is the caring for a computer to preserve it in a good working condition and to prevent damage while computer repair is the restoring of a computer to an acceptable condition by removing and then replacing or mending of damaged parts.

b) Write one reason for having the following items in the computer laboratory.

i) Woolen carpet

*Absorbs moisture from the floor
Absorbs sounds from movements
Protects devices from damage when they fall
Protects users from electrocution
Absorbs dust and prevents it from entering the computers*

ii) Blower

Removing dust from computer parts

iii) CCTV cameras

*Record and playback activities for reference purposes
Surveillance-act as a deterrent to theft and other crimes
Monitor security at data centers*

4a) Don is a new computer user. As an ICT student advise Don on which tool to use:

i) To trace files he cannot locate

Search from startup menu

Run on startup

Use search utilities like AVA find and search everything

ii) To trace a word from an open document

Find

Search

b) A student is typing a document using Microsoft Word. Write down three steps the student will use to shut down the computer.

Save the document and close the document

Click on the start button

Choose turnoff or shut down

5) State five activities that can be performed on a computer when using a mouse piece.

Pointing at items

Dragging and dropping items

Clicking

Double clicking

Scrolling

Zooming windows

Moving the pointer

Selecting or highlighting items/text

Drawing images

Creating shortcuts

6) Identify five ICT related employment opportunities in Uganda today.

Writing CDs

Music mixing

Internet café management

Video editing

Computer secretarial bureau management

Computer vendoring or dealing

Digital money transfer dealing

Teaching ICT

Computer servicing and repairing

Advert designing

Computer laboratory attending

Switchboard operating

Computer programming

Software engineering

Network administering

Servicing and repairing computers

7a) What is multiprocessing?

Involves the coordinated processing of tasks/programs by more than one processor

b) Give two advantages of each of the following operating systems.

i) Windows

Readily available on market

Software downloads, patches, fixes are available online

Supports networking

Supports multitasking

Compatible with almost all machines

Interoperable with most software

Easy to use since it supports many interfaces

Easy to learn

Light-takes little disk space

User support readily available online

ii) Linux

Supports networking

Supports multitasking

Interoperable with most software

Compatible with almost all machines

Free of charge

Flexible-users can change the code-open source

Resistant to viruses

8a) Name two examples of application software

Microsoft word

Word pad

Notepad

AmiPro

Microsoft Excel

Corel Quattro pro

Lotus 123

VisiCalc

Microsoft power point

Corel presentations

Lotus freelance graphics

Harvard graphics

Microsoft outlook

Corel CENTRAL

Lotus organizer

Palm desktop

Corel catalyst

Microsoft project

Primavera sure track

project manager

Autodesk Auto CAD

Microsoft Visio technical

Macromedia author ware

Macromedia director

Macromedia flash

Adobe illustrator

Paint photo shop

Corel draw

Macromedia free hand

Microsoft PhotoDraw

Adobe Photoshop

Meta creations painter

Adobe premiere

Ulead media studio pro

Ulead video studio

Fireworks

Adobe Go live

Adobe page Mill

Macromedia dream weaver

SuperCalc

Microsoft access

D-base

Fox pro

Paradox

Adobe in design

Adobe page maker

Microsoft publisher

Macromedia flash

Microsoft front page

Windows and Nero media

player

Power DVD

Microsoft Encarta

Mosby's medical

encyclopedia

Webster's dictionary and

thesaurus

Microsoft money

Inuit quicken

Encarta

Mavis Beacon Teaches

Typing

Web browsers

E-mail software

Chat rooms

Newsreader

Video conferencing

software

Instant messenger

Groupware

Intuit QuickBooks

Peachtree complete

accounting

Corel Ventura

QuarkXPress

Broderbund Print Shop

Pro

Corel drawing

Microsoft photo draw

Adobe photo shop

9a) What is the World Wide Web?

A global collection of electronic documents accessible through the internet

b) Show three ways in which the internet can facilitate trade and business.

Facilitates advertising

Facilitates business and trade communication

Facilitates online booking

Traders may pay online

Traders can exchange transaction documents online

Buyers can inspect documents online

10) Show one way in which the internet can be a danger to:

a) Morality

Exposure to pornography and illicit materials

Loss of respect to the elderly

May lead to juvenile delinquency

Young people may learn to take drugs

Decline in cultural norms and values

b) Labour

Loss of man-hours when workers surf at the expense of their work

Workers may do personal research wasting organizational resources

Internet may replace some workers rendering them jobless

Redundancy of workers when the internet connection fails

A lot of trickery and wrong information about jobs over the internet

Facilitates surveillance leading to loss of workers' privacy

Loss of craftsmanship and creativity due to over reliance on computers

c) System security

Facilitates rapid spread of computer viruses

Illegal access from hackers and crackers

Facilitates phishing and pharming

d) Human security

Facilitates surveillance which leads to loss of privacy

Defamation

Identity theft

Cyber bullying

Cyber terrorism

Impersonation

Abusive and threatening messages

e) Information

Eavesdropping

Computer viruses

Plagiarism

Unreferenced information

Wrong information

Change of data and information along communication lines

11) Explain the following attributes of computers which make them dependable and reliable tools.

a) Diligence

Computers can perform the same task over and over along period of time without getting tired.

b) Versatility

Computers can be used for many different tasks and can change from one task to another.

Computers can be used to perform completely different tasks at the same time or one at a time.

c) Accuracy

Computers are thorough/systematic/orderly once right instructions and data are entered.

Computers are so accurate that they hardly make mistakes.

12a) Describe the term computer literacy

Computer literacy refers to having the knowledge and understanding of computers and their uses.

b) Outline any three ways in which ICT can improve the quality of education.

Through e-learning that links schools and institutions

Through enabling multimedia usage which makes learning interesting

Saves educational costs

Facilitates educational research

Tool for teaching and learning

Enabling sharing and update of notes

Facilitates efficient information processing and communication

13a) Distinguish between copy a file and move a file.

Copy a file involves making a duplicate of a file while move a file involves changing the location of a file/transferring a file from one location to another.

b) Study the file path below and answer the questions that follow.

F:\accounts\bursar\fees.xls

i) Identify the file name

Fees or fees.xls

ii) On what drive is the file located?

Drive F

iii) In which sub-folder is the file located?

Bursar

14a) List any three input devices

Keyboard

Mouse

Touchpad

Trackball

Stylus and graphics tablet

Joystick

Microphone

Light pen

Pointing stick

Scanner

MIDI device

Sensor and remote sensor

Digital camera

Bar code reader

Digital video camera

Web camera

PC camera

Electronic whiteboard

Magnetic stripe reader

Optical mark recognition (OMR) reader

Magnetic ink character recognition (MICR) reader

Optical character recognition (OCR) reader

Touch screen

b) Give a function of any two input devices listed above.

*A **PC camera** allows home users to record, edit and capture video and still images and to make phone calls on the Internet.*

***Digital cameras** record images digitally on a disk rather than on a film and the images are transferred or downloaded onto the computer.*

***Digital video cameras** record motion digitally on a disk and have the capability to take still images as well.*

*A **pointing stick** is located in the middle of the keyboard and to control the pointer, you direct the stick with your finger.*

*A **touch pad** is used to control the pointer by moving and tapping your finger on the surface of a pad.*

*A **trackball** is used to control the pointer by rotating a ball with your thumb.*

*A **light pen** is a light sensitive pen-like device that is placed against the monitor for entering or changing data for example editing digital images.*

*A **touch screen** is a screen on which one is able to select actions or commands by touching the screen with a finger.*

*A **mouse** controls the pointer that is displayed on the computer screen.*

*A **joystick** is the most popular input device for computer games.*

***Webcams** are cameras that capture images and send them to a computer over the Internet.*

*A **scanner** is a device that can read text or illustrations printed on paper and translate the information into a form the computer can use.*

***BCR** are scanners that interpret vertical zebra striped marks seen on most manufactured retail products into digital form before passing them into the computer for processing.*

***MICRs** are used by banks to automatically read those unusual numbers on the bottom of cheques and deposit slips.*

***OCR** devices read special pre printed characters and convert them in a form which can be understood by the computer.*

***Magnetic strips readers** are used to read information contained in the magnetic strips on cards.*

*The **keyboard** is the most common device used for entering data and commands into a computer.*

***OMRs** are devices that read pencil marks and convert them into computer usable form before entering them into the computer.*

*The **graphics tablet and stylus** are mainly used for computer aided design and drafting by architects, mapmakers, artists and designers.*

***Voice recognition systems** provide the computer with the capability to distinguish spoken words.*

*A **light pen** can make selections, place images, draw and indicate dimensions by simply touching the screen.*

*A **microphone** is an input device that allows a user to speak to a computer to enter data and instructions into the computer.*

***MIDI devices** can be used to create, record and play back musical compositions*

*A **Sensor and remote sensor** is an input device that can detect external changes in an environment*

15) Identify the following from the email address: robert@yahoo.com

- | | | |
|--------------|------------------------------|---------------|
| a) i) | Domain name | <i>yahoo</i> |
| ii) | User name | <i>robert</i> |
| iii) | Top level domain name | <i>.com</i> |

b) i) Which type of organization does the domain name of the email user above subscribe to?
Commercial organization

ii) Give any other example other than the one you have stated above.

Military organization (.mil)

Educational organization (.edu)

Networking organization (.net)

Non governmental organisation (.org)

Government organisation (.gov)

16a) Define the term computer network.

A group or collection of computers connected or linked to each other to share resources and to communicate.

b) Give three disadvantages of networking computers.

Hardware, software and expertise needed are costly

Vulnerable to security problems since it facilitates easy spread of computer viruses

When the server fails the whole network may also fail

17a) Differentiate between a server and a client computer

A server is a computer that controls resources and responds to requests for resources from other computers whereas a client is a computer that requests for resources from the server.

b) What is the function of each of the following network devices?

i) Bridge

Used to connect similar networks

ii) Switch

Used to connect network segments and storing the address of every device connected to it

iii) Router

Used to send communication traffic to appropriate network using the fastest available path

18) The table below shows a worksheet which Nabirye was working on. Use it to answer the questions that follow.

	A	B	C	D	E	F
1	ID NUMBER	Name	Item 1	Item 2		
2	100000	Akello	990	34	29.1	
3	100002	Nambi	660	56	11.8	
4	#####	Busingye	880	-	#DIV/0!	
5			#NAME?			
6						

a)i) Suggest a reason why the entry in cell A4 appeared as shown.

The column width is not wide enough

ii) How do you rectify the error in cell A4?

Widen or increase the column width

Autofit

Reduce the font size

b) What does the error in cell E4 mean?

Attempting to divide a number by zero (0) which is mathematically wrong

c) How do you correct the error in cell C5?

Typing the correct function name

19a) Tick the three utility programs from the list below.

	TICK HERE
Web browser	
Data compressor	✓
Disk defragmentor	✓
Operating system	
Antivirus software	✓

b) State the function of any two utility programs you ticked above.

Disk defragmenter

The disk defragmenter utility reorganizes files and unused space on a computer's hard disk to access data more quickly and programs to run faster.

Antivirus utility

An antivirus utility is a program that prevents, detects and removes viruses from a computer's memory or storage devices.

Data compressors output a smaller file when provided with a stream or file.

20a) Explain the following terms giving an example in each case

i) Simplex

Data transmission in only one direction

Examples

Television broadcast

Radio broadcast

Keyboard transmission

Pagers

Temperature sensors

Door bell

ii) Half duplex

Data transmission in both directions but not at the same time

Examples

Radio call

Fax machines

Credit card verification systems

Automated teller machines

Walkie tokie

b) Identify one non-physical data transmission media.

	TICK HERE
Optic fibre	
Bluetooth	✓
Twisted pair	

END