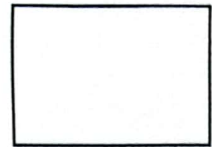


LEVEL



Candidate's Name: .....

Signature:.....

Random No.					Personal No.		

(Do not write your School/Centre Name or Number anywhere on this booklet.)

S850/1  
**SUBSIDIARY ICT**  
**Paper 1**  
**(Theory)**  
**Nov./Dec. 2024**  
2½ hours



**UGANDA NATIONAL EXAMINATIONS BOARD**

**Uganda Advanced Certificate of Education**

**SUBSIDIARY INFORMATION AND COMMUNICATIONS TECHNOLOGY**

**Paper 1**  
**(Theory)**

2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

*This paper consists of twenty questions.*

*Answer all the questions in this paper.*

*All the answers should be written in blue or black ink in the spaces provided.*

Questions	For Examiners' Use Only	
	Marks	Initials
1 – 2		
3 – 4		
5 – 6		
7 – 8		
9 – 10		
11 – 12		
13 – 14		
15 – 16		
17 – 18		
19 – 20		
<b>Total</b>		

Answer all questions in this paper.

1. (a) Differentiate between **data** and **information**. (02 marks)

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

- (b) For each of the items in the table below, indicate whether it is **data** or **information**. (03 marks)

Item	Data/ information
(i) Family budget	
(ii) Students' test scores in various subjects in a mid-term test	
(iii) Performance analysis graphs	

2. (a) Name the **two** print orientations for a document. (02 marks)

(i) .....  
(ii) .....

- (b) Identify **three** possible causes of a printer failing to print a document. (03 marks)

(i) .....  
.....  
(ii) .....  
.....  
(iii) .....  
.....



3. (a) Give **two** functions of arrow keys on a keyboard. (02 marks)

(i) .....

.....

.....

(ii) .....

.....

.....

(b) State the type of data input by the following devices. (03 marks)

(i) Scanner .....

(ii) Keyboard .....

(iii) Microphone .....

4. (a) Explain why the **Shut Down** option is used when turning off a computer system. (02 marks)

.....

.....

(b) Describe how the **Restart** option of the Shut Down menu functions. (02 marks)

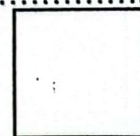
.....

.....

(c) Give the advantage of switching the computer into the **Sleep mode**. (01 mark)

.....

.....



**Turn Over**

5. (a) Distinguish between multi-user and multitasking operating systems software. (02 marks)

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

(b) State **three** examples of Multi-user operating systems. (03 marks)

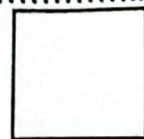
- (i) .....
- (ii) .....
- (iii) .....

6. (a) Give any **three** requirements for connecting a computer to the Internet. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

(b) Outline **two** disadvantages of using the Internet. (02 marks)

- (i) .....
- (ii) .....



7. (a) Explain how the following network models operate: (02 marks)

(i) Peer to peer. (02 marks)

.....

.....

.....

(ii) Client server. (02 marks)

.....

.....

.....

(b) Suggest one device that uses the simplex mode of communication. (01 mark)

.....

8. (a) What is an ICT innovation? (02 marks)

.....

.....

.....

(b) Suggest any two areas where ICT innovation is applied. (02 marks)

(i) .....

(ii) .....

(c) Give one example of an ICT innovation in one of the areas you have suggested in (b). (01 mark)

.....



9. (a) Describe the use of each of the following tools in presentation software.

(i) **Place holder.** (02 marks)

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

(ii) **Animation.** (02 marks)

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

(b) State **one** area where electronic presentation may be utilised. (01 mark)

.....

10. (a) Define the term **Green Computing.** (02 marks)

.....  
.....

(b) Outline any **three** ways of implementing green computing. (03 marks)

(i) .....  
.....

(ii) .....  
.....

(iii) .....  
.....



11. The following table shows files which have been saved on a flash disk.

File Name	File Extension	Size (MB)	Date Modified
Alululu	.mp3	50	23/04/2018
Aleluya	.jpeg	145	04/05/2018
Twist	.xls	05	13/05/2018

The space unused on the flash disk is 0.3 GB.

(a) Give the possible content of the file that was modified on 04/05/2018. (01 mark)

.....

(b) Calculate the maximum capacity in MBs of the flash disk. (02 marks)

.....

(c) Suggest **two** ways that can be used to create more space on this flash disk. (02 marks)

(i) .....

.....

(ii) .....

.....

12. (a) Outline **two** advantages of primary storage over secondary storage devices. (02 marks)

(i) .....

.....

.....

(ii) .....

.....

.....

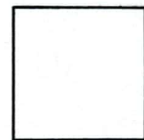
(b) Give any **two** types of secondary storage devices and **one** example of primary storage devices.

(i) Secondary storage devices. (02 marks)

.....  
.....

(i) Primary storage device. (01 mark)

.....  
.....



13. (a) A software that is distributed at no monetary cost at all is referred to as (01 mark)

.....

(b) Suggest **two** ways in which each of the following parties benefits from the shareware software.

(i) Enduser. (02 marks)

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

(ii) Shareware software developer. (02 marks)

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

14. (a) State any **two** factors considered when selecting data communication media. (02 marks)

(i) .....

.....

(ii) .....

.....

(b) Explain **bluetooth** transmission medium in data communication. (02 marks)

.....

.....

.....

.....

(c) Give an example of a network device that converts analog to digital signals and vice versa. (01 mark)

.....



15. (a) Suggest any **two** job opportunities for a candidate who has done ICT as a subject. (02 marks)

(i) .....

(ii) .....

(b) Write the symbols used for the following intellectual property rights. (03 marks)

(i) Copyright. ....

(ii) TradeMark. ....

(iii) Patent. ....

16. Select from the given list an appropriate term and fill it in the blank spaces provided for (a) to (e).

**LAN, Hacking, Virus, Mouse, Firewall, Video Conferencing.**

- (a) A tool that enables people in different geographical regions to hold a meeting online is ..... (01 mark)
- (b) A malicious program that disorganises the normal working of a computer is called a ..... (01 mark)
- (c) Computers linked together in a small geographical boundary form a ..... (01 mark)
- (d) A computer crime that may result in loss of data and information is referred to as ..... (01 mark)
- (e) A network security system that controls incoming and outgoing traffic is called ..... (01 mark)



17. (a) Explain the purpose of an address bus in a computer. (02 marks)

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

(b) State **one** function of a processor. (01 mark)

.....  
.....

(c) List any **two** components of processors. (02 marks)

(i) .....

(ii) .....

18. (a) (i) What is a Search Engine? (02 marks)

.....

.....

.....

(ii) Name **one** example of a Search Engine. (01 mark)

.....

(b) State the importance of the following signs in searching for a website.

(i) Plus (+) sign. (01 mark)

.....

(ii) Double quotation marks (“ ”). (01 mark)

.....



19. Select appropriate terms from the list below and complete the statements (a) to (d).

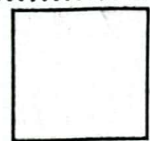
- **Interpreter**
- **DOS**
- **Compiler**
- **NOS**
- **Buffering**
- **Disk defragmenter**
- **WinZip**
- **PASCAL**

- (a) An example of an operating system with a command line interface is ..... (01 mark)
- (b) One of the memory management functions of the Operating System Software is ..... (01 mark)
- (c) The **two** examples of a language processor are (02 marks)
- (i) .....
- (ii) .....
- (d) A tool that can be used to compress files is..... (01 mark)

20. (a) List **three** features that make desktop publishing software ideal for specialised publications. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

- (b) Give **two** outputs of desktop publishing software. (02 marks)
- (i) .....
- (ii) .....



**UGANDA NATIONAL EXAMINATION BOARD UACE 2024**  
**DRAFT MARKING GUIDE**  
**SUBCIDIARY ICT**  
**S850/1**

1. (a) **Differentiate between data and information.** (02 marks)  
Data refers to raw/unprocessed facts, text, figures numbers, content with less meaning while Information is processed data that is meaningful to use.  
*Anyone side correct =1mark*
- (b) (i) Information (ii) Data (iii) Information  
(Each 01 mark = 03 marks)
2. (a) (i) Portrait (ii) Landscape (Each 01 mark = 02 marks)
- (b) **causes of a printer failing to print a document.**
- Wrong selection of a printer.
  - Incompatible printer software/drivers.
  - Lack of print drivers/ corrupted drivers.
  - Wrong connection of the printer.
  - Low power supplied to the printer.
  - Having many print jobs in the que (low memory).
  - Paper jam. - Poor paper quality
  - Open printer trays / doors.
  - Lack of toner / ink in the cartridge.
  - Wrong toner / ink in the cartridge.
  - Overloading paper trays. - Lack of paper in the trays.
  - Wrong paper size selection.
  - Faulty printer. - Faulty printer cable.
  - Network failure in case of a network printer. (Any 3 x 01 =03 marks)
  - Out dated drivers.
3. (a) **functions of arrow keys on a keyboard.** (02 marks)
- For scrolling. - For navigation.
  - Cursor positioning/ movement.
  - For selection.
  - Game controlling. (Any 2 x 01 =02 marks)
- (b) (i) - Images/graphics/picture.  
(ii) - Text/characters. (Each 01 mark)  
(iii) - Sound/audio/voice.
4. (a) **why the Shut Down option is used when turning off a computer system.**
- To prompt/notify a user to keep the unsaved work.
  - To properly close all the running programs to avoid data loss.
  - To properly close all the running programs to avoid damage.
  - Apply Updates. Installs pending updates or changes that require a restart to take effect. (Any 2 x 01 =02 marks)

(b) **how the Restart option of the Shut Down menu functions.** (02 marks)

- Powers down the computer and reboots / resets it automatically.

(c) **advantages of switching the computer into the sleep mode.** (01 mark)

- It saves power.
- Provides security on data.
- Quick / fast system resumption/ users can quickly resume their system.
- Cuts off radiation emission from the screen/monitor display.
- Helps to switch to another user account.

(Any 1 x 01 =01 mark)

5. (a) **Distinguish between multi-user-and multitasking Operating systems software.**

Multi-user operating system allows many users to interact with the system simultaneously while multi-tasking operating system allows a user to run more than one tasks/jobs at ago. *Anyone side correct =1mark*

(b) **examples of Multi-user operating systems.**

- |                    |             |
|--------------------|-------------|
| – Windows OS       | – AI-X      |
| – Mac OS           | – Ubuntu    |
| – Linux            | – Unix      |
| – Fedora           | – Solaris   |
| – IBM Z/OS         | – Free BSD  |
| – Novel            | – IOS       |
| – Android /SoS/XoS | – Chrome OS |

(Any 3 x 01 =03 marks)

6. (a) **requirements for connecting a computer to the Internet.**

- |   |              |
|---|--------------|
| – Modem.  | – NIC        |
| – ISP   | – Computing. |
| – Router  |              |
| – Network cable / Wi-Fi/ cellular data/ connection methods. |              |

(Any 3 x 01 =03 marks)

(b) **disadvantages of using the Internet.**

- Leads to moral decay (exposure to pornography).
- Loss of data due to virus attack.
- Theft of data/information through cybercrimes.
- Misleading / false/wrong/ fake information.
- Leads to social isolation / disconnect.
- Addiction to internet services.
- Spamming which leads to accumulation of junk messages on storage space.
- Leads to increase on operational costs (expensive).
- Loss of man hour hence affecting productivity.
- Over dependence on internet kills creativity.

(Any 2 x 01 =02 marks)

7. (a) **Explain how the following network models operate:**

(i). **Peer to peer.**

- All computers on the network work both as servers / clients or have equal rights in communication.
- A network where computers are connected directly to each other without relying on the server.

(Any 1 x 02 =02 marks)

(ii). **Client server.**

- A network where computers are connected to / controlled by one server to access resources.
- Network computer and other devices are managed by a central computer called server.
- computers on a network (nods/clients) connect and access resources from the server.

(Any 1 x 02 =02 marks)

(b) **one device that uses the simplex mode of communication.**

- Radio receiver.
- Television set.
- Keyboard.
- Mouse.
- Microphone.
- Pager (a telecommunication device that only receive instructions)
- Speaker.
- Monitor.
- Remote controller.
- Printer.

(Any 1 x 01 =01 mark)

8. (a) **What is an ICT. innovation?**

- Development and implementation of new ideas and technologies that utilize ICT to improve on the efficiency and effectiveness in processing communication and user preferences.
- Development and implementation of new ideas & technologies that utilize ICT to solve the problem in society.

(02 marks)

(b) **areas where ICT innovation is applied.**

- Education.
- Medical /Health science.
- Business.
- Engineering / industry/ manufacturing.
- Astronomy/ space science.
- Agriculture/ farming.
- Security /military.
- Environment/ climate.
- Communication / information.
- Transport.
- Banking / financial.
- Governance /politics.
- Homes.

(Any 2 x 01 =02 marks)

(c) **an example of an ICT innovation in one of the areas you have suggested in (b).**

- Mobile applications such as mobile apps for mobile money.
- Applications for mobile treatment and diagnosis of the sick.
- AI innovations e.g. robotics, machine learning innovation, nanotechnology, neuro networks, natural language processing, expert systems, computer vision, voice/ speech recognition, etc.
- Simulation programs.
- Animation e.g. 3D animations.
- Cloud computing.
- Video conferencing.
- Computerized automobiles.
- Telecommuting.
- Smart technologies e.g. smart watches, smart phones.

(Any 1 x 01 =01 mark)

9. (a) Describe the use of each of the following tools in presentation software.

(i) Place holder. (02 marks)

It is a box/ structure / area designed to contain objects/ elements on a slide such as text, images, charts, tables. (02 marks)

(ii) Animation. (02 marks)

It is a tool/ feature that adds visual effects on objects on a slide.

It is a feature in a presentation that defines how objects on a slide will appear and disappear during a slide show. (02 marks)

(b) area where electronic presentation may be utilized. (01 mark)

- Workshops.
- Meetings.
- Conferences.
- Classrooms / teaching.
- Concerts.
- Advertisement.
- Worship areas. etc.

(Any 1 x 01 =01 mark)

10. (a) Define the term Green Computing.

It is a use of computer technologies (ICT tools) in a more environmentally friendly way.

A study of designing, manufacturing, using and disposing off computing devices in away that reduces environmental negative impact (degradation).

(02 marks)

(b) ways of implementing green computing.

- Switching off the computer (ICT devices) when not in use.
- Making use of energy saving gadgets.
- Activating a blank screen saver mode to save energy.
- Through cloud computing.
- Consolidating storage i.e. using one central storage area.
- Virtualization of servers.
- Through recycling.
- Proper disposal of electronic waste.
- Encourage use of visual display to reduce on paper materials.
- Through using re-usable gadgets.
- Sensitizing people about green computing programs.

(Any 3 x 01 =03 marks)

11. (a) Image/Photo/Graphics (01 mark)

(b)  $50 + 145 + 05 = 200$  MBs

$$1 \text{ GB} = 1024 \text{ MB}$$

$$0.3 \text{ GB} = 0.3 * 1024 \text{ MB}$$

$$= 307.2 \text{ MBs}$$

$$= 200 + 307.2 = 507.2 \text{ MBs}$$

or

1 GB  $\approx$  1000 MB

0.3 GB  $\approx$  0.3 \* 1000 MB

= 300 MBs

= 200 + 300  $\approx$  500 MBs

**02 marks)**

**(c) ways that can be used to create more space on this flash disk.**

- Compressing files.
- Deleting unwanted files.
- Formatting the disk.
- Transferring files to another storage media.

**(Any 2 x 01 =02 marks)**

**12. (a) advantages of primary storage over secondary storage devices.**

- Data can be processed directly.
- Provides faster data access.

**(Any 2 x 01 =02 marks)**

**(b) (i). Secondary storage**

- Magnetic storage.
- Solid state storage.

- Optical storage.

**(Any 2 x 01 =02 marks)**

**(ii) Primary storage.**

- RAM
- Cache memory.
- ROM
- Register.

- Buffer.
- CMOS

**13. (a) Freeware (01 mark)**

**(Any 1 x 01 =01 mark)**

**(b) (i) Enduser.**

- Saves money for the use during trial period.
- It allows to study the performance of the software before buying it.
- Users can easily get assistance from other users of the software.

**(Any 2 x 01 =02 marks)**

**(ii) Shareware software developer. (02 marks)**

- Widens market for the software.
- Allows one to know the legitimate buyer of the software.
- Gives chance for the product to be tested practically.
- Feedback from customers help improve on the product.

**(Any 2 x 01 =02 marks)**

**14. (a) factors considered when selecting data communication media.**

- Cost of the media.
- Distance covered by the media.
- Size of the area to occupy.
- Volume of the data to be transmitted/ bandwidth.
- Level of security.
- Nature of the message/ data.
- Transmission speed/ data transfer rate.
- Scalability of / number of users.
- Durability transmission media.
- Compatibility of the transmission media.

**(Any 2 x 01 =02 marks)**

**(b) Explanation of Bluetooth transmission medium in data communication.**

A technology / standard that enables wirelessly connected devices to share data in a relatively short distance.

It is a short-range transmission media which uses radio waves for data sharing between connected devices.

It is a technology that shares data in a short distance 2.4GHz on radio waves.

**(02 marks)**

**(c) MoDem**

**(01 mark)**

**15. (a) job opportunities for a candidate who has done ICT as a subject.**

- Secretarial services such as typing data/ data entry.
- Graphic designing.
- Print publication.
- Being a computer lab attendant/ technician.
- Being an internet café attendant.
- Selling computer equipment/ accessories.
- Teaching ICT/ tutoring.
- Starting a video/ music library.
- CD burning, etc.

**(Any 2 x 01 =02 marks)**

**(b) (i) ©**

**(ii) ®/ TM / SM**

**NB:** ® - for registered trademarks  
TM - for unregistered trademarks  
SM – service other than goods.

**(iii) ®/ “Pat” / “Patented”**

**(01 mark each)**

**16. (a) Video Conferencing**

**(b) Virus**

**(c) LAN**

**(d) Hacking**

**(e) Firewall**

**(01 mark each)**

**17. (a) Explanation of the purpose of an address bus in a computer.**

Carries memory addresses from the processor to other components such as primary storage and output devices.

**(02 marks)**

**(b) one function of a processor.**

- Performs calculations in a computer.
- Controls and manages components of the computer.
- Executes of instructions.
- Accessing memories.

**(Any 1 x 01 =01 mark)**

**(c) lists of components of processors.**

– Control Unit (CU)

– Arithmetic Logic Unit (ALU)

18. (a) – Registers
- (i) **definition of a Search Engine.** (Any 2 x 01 =02 marks)  
 It is a tool/ software/ program used to locate specific information using key words on websites. (02 marks)
- (ii) **example of a Search Engine.**
- |              |              |
|--------------|--------------|
| – Google     | – Naver      |
| – Bing       | – MSN        |
| – Yahoo      | – Ask Jeeves |
| – DuckDuckGo | – Ecosia     |
| – Baidu      | – AOL        |
| – Yandex     | – Lycos      |
| – Ask.com    | – Dogpile    |
| – Excite     | – Seznam     |
- (Any 1 x 01 =01 mark)
- (b) (i) **Plus (+) sign.**  
 Forces inclusion of a word in the search once placed in front of a word.  
 Tells a search engine the word must be present in the search results. (01 mark)
- (ii) **Double quotation marks**  
 Helps in the search of the word or phrase as it appears once placed around it. (01 mark)
19. (a) DOS
- (b) Buffering
- (c) (i) Compiler
- (ii) Interpreter
- (d) WinZip (01 mark each)
20. (a) **Lists of features that make desktop publishing software ideal for specialized publications.**
- |                               |                        |
|-------------------------------|------------------------|
| – Layouts                     | – Master page.         |
| – Style sheets.               | – Tool box.            |
| – Inbuilt templates.          |                        |
| – Ruler.                      |                        |
| – Specialized cropping tools. | (Any 3 x 01 =03 marks) |
| – Frames. etc.                |                        |
- (b) **outputs of desktop publishing software.**
- |  |                        |
|--|------------------------|
| – Certificates.                        | – Calendars.           |
| – Business cards.                      | – Signs                |
| – Brochures.                           | – Receipts             |
| – Flyers.                              | – Banners.             |
| – Posta cards.                         | – Labels.              |
| – Invitation cards.                    | – Magazines.           |
| – Menus                                | – Identity cards.      |
| – Greeting cards/ seasonal cards, etc. | (Any 2 x 01 =02 marks) |



Candidate's name: .....

Signature: .....

Random No.					Personal No.		

(Do not write your School/Centre name or Number anywhere on this booklet.)

**S850/1**  
**Subsidiary Information**  
**and Communication**  
**Technology (ICT)**  
**Paper 1**  
**Nov./Dec. 2023**  
**2½ hours**



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
**2 hours 30 minutes**

**INSTRUCTIONS TO CANDIDATES:**

*The paper is made up of twenty equally weighted questions.*  
*Answer all the questions in this paper.*  
*All the answers should be written in blue or black ink in the spaces provided in the question paper.*

Questions	For Examiners' Use Only	
	Marks	Initials
1 - 2		
3 - 4		
5 - 6		
7 - 8		
9 - 10		
11 - 12		
13 - 14		
15 - 16		
17 - 18		
19 - 20		
<b>Total</b>		

*Answer all the questions in this paper.*

1. (a) Distinguish between **analog** and **digital** computing devices. (02 marks)

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

- (b) List **three** advantages of digital computing devices. (03 marks)

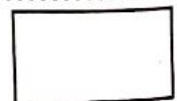
(i) .....  
.....  
(ii) .....  
.....  
(iii) .....  
.....

2. (a) State **two** possible causes of fire outbreaks in a computer laboratory. (02 marks)

(i) .....  
.....  
(ii) .....  
.....

- (b) Outline **three** measures a school should put in place to have a secure computer laboratory. (03 marks)

(i) .....  
.....  
(ii) .....  
.....  
(iii) .....  
.....



3. Use the following terms to complete the statements in (a) – (e):

- Diagonistic Utility
  - WinZip
  - Backup Utility
  - Screen Saver
  - Defragmenter
  - Uninstaller
- (05 marks)

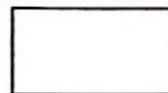
- (a) The utility that automatically displays a moving image or pattern on the monitor when the computer is idle is called.....
- (b) The utility that is used to remove a software from a computer system is called.....
- (c) The utility that compresses files so that they can be stored or distributed more efficiently is .....
- (d) The utility that rearranges files stored on a disk to occupy contiguous storage locations is.....
- (e) The application used to create a duplicate copy of data to safeguard it and enable recovery in the event it is lost is a .....

4. (a) Describe an optical storage device. (02 marks)

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

(b) Give **three** advantages of using a flash disk over a compact disc. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....



5. (a) Define **system software** as used in computers. (02 marks)

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

(b) List **three** types of system software. (03 marks)

(i) .....  
(ii) .....  
(iii) .....

6. (a) State the importance of each of the following devices to a banking institution:

(i) Closed Circuit Television (CCTV). (01 mark)

.....  
.....

(ii) Magnetic Ink Character Reader (MICR). (01 mark)

.....  
.....

(b) Identify **three** computerised methods that banks are employing to reduce on time wastage. (03 marks)

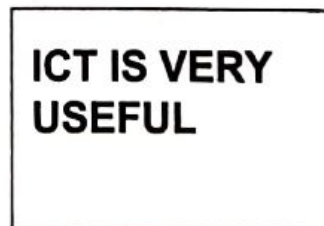
(i) .....  
(ii) .....  
(iii) .....

7. (a) Select from **A** and **B** the print orientation **Portrait** ..... (01 mark)

**A**



**B**



(b) Explain the following print options:

(i) Set as default printer.

(02 marks)

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

(ii) Current page.

(02 marks)

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

8. Use the options below to complete the statements that follow.

- VGA port
- Ethernet port
- Fire wire port
- Parallel port
- PS/2 port

(05 marks)

(a) The port that connects a network cable to a computer is

.....

(b) The port that transfers large amounts of data at a very fast speed is

.....

(c) A printer port can be referred to as .....

(d) The port that connects a monitor to a system unit is .....

(e) Another name for a mouse port is .....



9. (a) (i) Explain the term **Software Suite**.

(02 marks)

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

(ii) Give **one** example of a Software Suite.

(01 mark)

.....

(b) Outline **two** advantages of off-the-shelf software.

(02 marks)

(i) .....

.....

(ii) .....

.....

10. (a) Write two protocols that facilitate the process of sending and receiving emails. (02 marks)

(i) .....

(ii) .....

(b) Give three reasons why you would prefer using email to the traditional postal service. (03 marks)

(i) .....

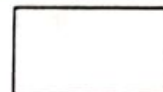
.....

(ii) .....

.....

(iii) .....

.....



11. Select an option from the given table that describes each of the processor components (a) – (e).

OPTION	DESCRIPTION
I	Fetches, decodes and executes instructions.
II	Performs arithmetic and logical operations on data.
III	Special temporary storage locations within the CPU that quickly accept, store and transfer data and instructions that are being used immediately.
IV	Electronic pathway that transfers information/instructions.
V	Sets the speed with which a computer performs operations.
VI	Is a system that performs programmatic calculations.
VII	Temporary holding area for data which is currently subject to repeated access.

(a) Clock rate ..... (01 mark)

(b) Cache ..... (01 mark)

(c) Data bus ..... (01 mark)

(d) Control unit ..... (01 mark)

(e) Register ..... (01 mark)

12. State the **five** elements of data communication. (05 marks)

- (a) .....
- (b) .....
- (c) .....
- (d) .....
- (e) .....



13. (a) Explain the term **digital forensics**. (02 marks)

- .....
- .....
- .....

(b) Outline any **three** limitations of digital forensics. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

14. (a) State the function of language processors. (01 mark)

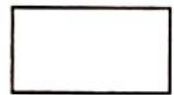
- .....
- .....

(b) Write any **two** examples of high level programming languages. (02 marks)

- (i).....
- (ii) .....

(c) Give any **two** advantages of using high level programming languages.

- (i) .....
- (ii) .....



15. (a) Explain the concept of **Cloud Computing**. (02 marks)

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

(b) Give **three** merits of Cloud Computing. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

16. (a) State any **three** network attacks. (03 marks)

(i) .....

(ii) .....

(iii) .....

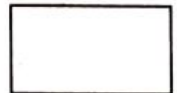
(b) Outline ways of protecting the network against any **two** of the attacks you have stated in (a). (02 marks)

(i) .....

.....

(ii) .....

.....



17. (a) Identify any **one** transmission media that is used in wired networks. (01 mark)

.....

(b) Explain the following terms as used in data communication and networking:

(i) **Line of Sight**. (02 marks)

.....

.....

.....

(ii) **Attenuation.** (02 marks)

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

18. (a) Name any **one** type of text alignment in a document. (01 mark)

.....

(b) Describe the following features as used in word processing:

(i) **Word Wrap.** (02 marks)

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

(ii) **Mail merge.** (02 marks)

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

19. (a) Define a computer network. (02 marks)

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

(b) Give any **three** benefits of a computer network. (03 marks)

(i) .....

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

(iii) .....

.....

20. The students' table below was extracted from a school database. Study it and answer the questions that follow.

**STUDENTS' TABLE**

STUDENT NO.	NAME	DISTRICT	TEL-CONTACT	DOB
KT-001	RUBABURA JOHN	SHEEMA	+256-778745445	12/04/1997
KT- 002	LATIM TIMOTHY	NWOYA	+256- 787866857	01/04/2002
KT - 003	SEMPA GEOFFREY	MPIGI	+256-774577887	28/06/1999
KT - 004	AMVIKO MALLET	ARUA	+256-395745564	12/04/2001

- (a) Identify the appropriate primary key. (01 mark)  
 .....
- (b) Suggest the data type that should be used for the **TEL-CONTACT** field. (01 mark)  
 .....
- (c) Give **one** reason for setting up suitable data types. (01 mark)  
 .....
- (d) Write a statement that would return all names of students born after 01/01/2000. (02 marks)  
 .....



DRAFT MARKING GUIDE

SUBSIDIARY ICT

S850/1

1. (a) **Distinction between analog and digital computing devices.**

- Analog devices process and represent data in continuous/variable/changing phenomena/wave form while digital devices process and present data in discrete/discontinuous/separate/binary form (numbers of 0s and 1s).
- or
- Analog devices operate by measuring while digital devices operate by counting.

*Any one side correct = 1 mark but with a conjunction.*

(02 marks)

(b) **Advantages of digital computing devices.**

- They are very accurate in data processing.
- They are more reliable/do not degrade with time.
- They are faster in data processing.
- They are easier to configure/set. *User friendly*
- They are more flexible/versatile.
- They provide better security measures on data.
- They are cheaper because they are readily available.
- They are easier to reprogram.
- They have <sup>less</sup> no environmental interference.
- They provide clear and exact results.
- They make less noise.
- They consume less power during processing.
- They have the ability to store data.

(Any 3 x 01 = 03 marks)

2. (a) **Possible causes of fire outbreaks in a computer laboratory.**

- Poor power connections.
- Machine malfunction.
- Overloading the circuit.
- Smoking in the laboratory.
- Lightening sparks.
- Aging devices.
- High voltage supply in the circuit.
- Deliberate and malicious activities (intentional behaviors)
- Open or naked live wires.
- Carrying liquids in the laboratory. *Flammable substances*
- Damaging cables by rodents like rats.

- *correcting when power is on*
- *Power fluctuation*
- *Over heating power*

(Any 2 x 01 = 02 marks)

**(b) Measures to have a secure computer laboratory.**

- Installing CCTV cameras.
- Using qualified technician to handle lab equipment.
- Using qualified electrician for proper wiring.
- Putting strong burglar proof doors and windows to limit physical access.
- Using power regulating devices like UPS.
- Employing security personnel to guard laboratory premises.
- Regular cleaning of the computer laboratory to reduce on dust accumulation.
- Installing lightening arrestors.
- Designing a lab with proper aeration to avoid overheating.
- Mounting fire extinguishers.
- Using strong and appropriate furniture.
- Proper lighting system.
- Using insulated wires.
- Putting woolen carpets.
- Installing fire/smoke sensors/detectors.
- Organizing fire drills to sensitize users on how to handle fires.
- Putting in place effective laboratory rules and guidelines to be followed by Laboratory users.

(Any 3 x 01=03marks)

**3. Use terms to complete statements.**

- a. Screen saver
- b. Uninstaller
- c. WinZip
- d. Defragmenter
- e. Backup Utility

(Each 01 mark = 05marks)

**4. (a) Description of an optical storage device.**

- A device/hardware that uses light/laser mechanism to write or read (access) data. (02 marks)

**(b) Advantages of using a flash disk over a compact disc**

- A flash disk is more portable.
- It is compatible with a variety of devices.
- It has a faster data access rate
- It has a larger storage capacity
- They exist in a variety of storage capacities.
- They are more durable
- It is cheaper in terms of per unit of storage space.
- It does not need an additional drive to operate it.

(Any 3 x 01=03marks)

5. (a) **Definition of system software.**

- It is a category of computer software that <sup>control</sup> manages a computer and all its resources.

(02marks)

(b) **Types of system software.**

- Operating system
- Utility software/service programs
- Programming languages

(Each 01 mark=03marks)

6. (a) **Importance of the following devices to a banking institution.**

(i) **Closed Circuit Television (CCTV)**

- For monitoring security. *surveillance*
- Providing evidence during investigations.

(Any 1 x 01=01mark)

(ii) **Magnetic Ink Character Reader (MICR)**

- It helps in reading/recognizing data written on cheques.
- It facilitates the verification process of cheques
- It speeds up the process of capturing data from cheques.

(Any 1 x 01=01mark)

(b) **Computerized methods that banks are employing to reduce on time wastage.**

- Use of ATM for self-banking.
- Use of Mobile banking.
- Use of Agent banking.
- Use of Teller sign in service/Token machines to create order.
- Use of internet banking. *online banking*
- Use of inter-switch service/visa cards.
- Use of Electronic Funds Transfer (EFT)service.
- Use of credit/debit cards.
- Use of MICR for verification of cheques
- Use of machines to count large sums of money in case of bulk banking.
- Use of biometric devices to authenticate individuals for particular services.
- Issuing of E-statement using email.
- Automatic SMS alerts

(Any3 x 01=03marks)

7. (a) **Print orientation Portrait:** A

(01 mark)

(b) **Explanation of print options:**

(i) **Set as default printer:**

- It is an option/feature/printer setting that assigns a particular printer to be automatically selected to run the printing activity.

(02 marks)

(ii) **Current page:**

- It is an option that enables a printer to print a page where the cursor is positioned.

or

- This option causes the printer to print contents on the page displayed on the screen.

(02 marks)

**(b) Reasons why email is preferred to traditional postal service**

- Email is cheaper in terms of sending messages over long distances.
- Email service quickly provides proof for delivery of message.
- With email, it is possible to send the same message to many recipients at the same time.
- Email is delivered faster.
- Email can be sent/received at any time.
- Messages sent through email are kept/stored for future reference.
- Email can be sent/received from anywhere irrespective of the geographical location.

(Any 3 x 01=03marks)

11. (a) Clock rate: V  
(b) Cache: VII  
(c) Data bus: IV  
(d) Control Unit: I  
(e) Register: III

(Each =01 =05marks)

**12. Elements of data communication**

- Sender/sending device/source computer/transmitter
- Message/data/instruction
- Transmission Medium/Path/channel
- Receiver/Receiving device/destination
- Protocol

(Each =01=05marks)

**13. (a) Explanation of digital forensics.**

- This is the science involved in the collection, analysis and verification of evidence found on digital devices for investigation.
- Or
- This is the science involved in the collection, analysis and verification of evidence using digital devices for investigation.

(02marks)

**(b) Limitations of digital forensics.**

- Shortage of qualified personnel.
- Shortage of tools to use in collection of data.
- Tampering with the scene of crime.
- Use of steganography techniques/hiding/masking, time stamping.
- Lack of physical evidence at scenes.
- Volatility of the digital device.
- Rapid advancement in technology that is hard to be investigated on.
- Limited funds to facilitate the processes.
- Encryption of data by the perpetrator.
- Limitation from legal entities/rights
- Requires a lot of time to rely on during investigation.
- Online anonymity and proxy servers.

(Any 3 x 01=03marks)

**8. Complete statements below using options provide.**

- (a) Ethernet port
- (b) Fire wire port
- (c) Parallel port
- (d) VGA port
- (e) PS/2 port

(Each 01mark =05 marks)

**9. (a)(i) Explanation of software suite.**

- It is a collection/set/group of individual applications that are sold/obtained/acquired/installed together as a single package/entity.

(02 marks)

**(ii) Example of software suite.**

- Microsoft office suite
- Open Office suite
- WPS
- Smart office
- K-Office - King soft office
- Adobe suite
- Lotus suite
- Apple iwork
- Google suite
- Libre Office

(Any 1 x 01=01mark)

**(b) Advantages of off-the-shelf software.**

- They are thoroughly tested and hence error/bug free.
- They are relatively cheaper.
- They are readily available.
- They have online support.
- They have online updates.
- They are user friendly.
- They cater for a wider variety of users.
- It is easy to get help/assistance from many users because they are popular.
- They can run on multiple operating systems (across platform software)

(Any 2 x 01=02marks)

**10. (a) Protocols that facilitate the process of sending and receiving emails.**

- SMTP (Simple Mail Transfer Protocol)
- POP (Post Office Protocol)
- IMAP (Internet Mail Access Protocol)
- MAP1 (Mail Access Protocol)

(Any 2 x 01=02marks)

**14. (a) Function of language processors.**

- They translate source codes in object/machine codes.
- Convert high level languages and assembly codes into machine code/low level languages. (Any 1 x 01=01mark)

**(b) Examples of high level programming languages.**

- |          |           |          |
|----------|-----------|----------|
| - C      | - COBOL   | - Ada    |
| - C++    | - ALGOL   | - PROLOG |
| - Pascal | - FORTRAN | - LISP   |
| - BASIC  | - Python  | - PHP    |
| - Java   | - HTML    |          |

(Any 2 x 01=2marks)

**(c) Advantages of using high level programming languages.**

- Easy to use when writing programs (user friendly).
- They are machine independent.
- They are easy to debug.
- It gives a programmer fewer chances of making errors when writing a code. (Any 2 x 01=02marks)

**15. (a) Explanation of cloud computing.**

- It is the use of internet based platform to manage, control or access computer resources. (02marks)

**(b) Merits of cloud computing.**

- Provides unlimited storage space. *1 data backup*
  - Faster sharing of resources.
  - Provision of security on data.
  - Improvement in performance as companies operate by virtual servers which are powerful than their own computers.
  - Reduces costs of buying very many independent computers.
  - Accumulation of income to companies/service providers that are cloud computing service providers
  - They provide employment opportunities
  - Services can be accessed from anywhere anytime
  - *Promotes green computing*
  - *Enables team work collaboration*
- 799*  
*130*

---

*92*
- (Any 3 x 01=03marks)

**16. (a) Network attacks.**

- |                           |                               |
|---------------------------|-------------------------------|
| - Eavesdropping/tapping   | - Sniffing                    |
| - Denial of service (DOS) | - Spoofing                    |
| - Hacking                 | - Data alteration             |
| - Pharming                | - Cracking                    |
| - Phishing.               | - Vishing                     |
| - Virus attack and worms  | - Cyber stalking              |
| - Espionage               | - Vandalizing network devices |
- *Spamming*
- (Any 3 x 01=03marks)

**(b) Ways of protecting the network against attacks stated in (a) above.**

- *Public sensitization*
- Apply secure/strong password.
- encrypting data
- Installing and updating antivirus
- Using Audit logs
- Activating firewalls
- Physically locking network devices into racks or cages
- Turning on automatic software updates

*(Any 2 x 01=02marks)*

*Solutions should be solving any two attacks mentioned above.*

**17. (a) Any one wired network transmission media**

- Coaxial cable
- Twisted pair cable
- Fibre optic cables

- (Any 1 x 01=01mark)

**(b) Explanation of terms**

**(i) line of sight**

- It is a signal target path from the transmitter to the receiver device
- Or
- Is an electromagnetic wave travelling in a straight line from one device to the other.

(02 marks)

**(ii) Attenuation**

- It is the loss or reduction in the strength and quality of signal during transmission.

(02 marks)

**18. (a) Any onetype of text alignment**

- Centre
- Left
- Right
- Justify

- (Any 1 x 01=01mark)

**(b) Description of word processing features**

**i. Word wrap**

- It is a feature that automatically moves a cursor/word to the new line without pressing the enter button.

Or

- A feature that automatically sends a word that does not fit within the margin setting onto the next line without pressing the enter key. (02marks)

**ii. Mail merge**

- A feature that allows duplication of the same document to different recipients.

Or

- A feature used to create similar letters/documents to be sent to several people with different addresses at the same time. (02marks)

**19. (a) Definition of a computer network**

- Is a set/group/collection of computers and other devices connected together for the purpose of sharing resources.

Or

- Is a connection of computers for the purpose of sharing resources.

(02marks)

**(b) Any three benefits of a computer network.**

- It facilitates collaboration/sharing tasks among workers
- It is economical
- Ensures centralized security.
- Centralized management of data.
- Faster sharing of resources.
- Sharing of internet connection
- Increased storage capacity
- Improved communication

(Any 3x01=03marks)

20.

(a) Appropriate primary key: **STUDENT NO** (01 mark)

(b) Data type for TEL-CONTACT: **short text/text** (01 mark)

(c) Reason for setting up suitable data types.

- For grouping of data
- For easy and fast data entry
- To reduce on errors
- For easy manipulation of data like performing calculations

(Any 1 x 1=01mark)

(d) Statement that returns all names of students born after 01/01/2000

>#01/01/2000#

>01/01/2000

(Any 1x 02 = 02marks)

Candidate's Name: .....

Signature: .....

Random No.					Personal No.		

(Do not write your School/Centre Name or Number anywhere on this booklet.)

S850/1  
**Subsidiary Information  
and Communication  
Technology (ICT)  
Paper 1  
Nov./Dec. 2022  
2½ hours**



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

*This paper is made up of twenty equally weighted questions.*  
*Answer all the questions in this paper.*  
*All answers should be written in blue or black ink in the spaces provided in the question paper.*

Questions	For Examiners' Use Only	
	Marks	Initials
1-2		
3-4		
5-6		
7-8		
9-10		
11-12		
13-14		
15-16		
17-18		
19-20		
<b>Total</b>		

*Answer all questions in this paper.*

1. (a) Define a computer system. (02 marks)

.....  
.....

(b) List **three** examples of portable computing devices. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

2. The properties of a folder are given below:

**Type** : File folder  
**Location** : C:\User\Student1\Desktop  
**Size of the folder** : 3.15MB  
**Size of the disk** : 3.17MB  
**Contains** : 7 files

(a) State the storage medium for the folder. (01 mark)

.....

(b) Convert the size of the folder to bytes. (02 marks)

.....  
.....

(c) Identify the subfolder where the files are located. (01 mark)

.....

(d) Write the path of the folder. (01 mark)

.....



3. (a) State any **three** qualities of a good printer. (03 marks)

(i) .....

(ii) .....

(iii) .....

(b) Give **one** use of each of the following devices:

(i) Projector. (01 mark)

.....

.....

(ii) Speaker. (01 mark)

.....

.....

4. Indicate **TRUE** or **FALSE** for each of the following security measures in a computer laboratory. (05 marks)

	<b>SECURITY MEASURE IN THE COMPUTER LABORATORY</b>	<b>TRUE/ FALSE</b>
(a)	Computer laboratory equipment should be regularly cleaned with spirit-based cleaning reagent.	
(b)	A surveillance camera protects computer laboratory assets from theft.	
(c)	Uninterruptible Power Supply unit reduces the A.C. voltage to a lower D.C. voltage.	
(d)	Water based fire extinguishers are the best for putting out fire in a computer laboratory.	
(e)	An air conditioner regulates the computer laboratory room temperature.	



5. (a) Distinguish between **System Software** and **Application Software**. (02 marks)

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

(b) List any **three** categories of system software. (03 marks)

(i) .....  
(ii) .....  
(iii) .....

6. (a) Explain the term **Netiquette** as used in Internet. (02 marks)

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

(b) Outline any **three** netiquettes of Internet. (03 marks)

(i) .....  
.....  
(ii) .....  
.....  
(iii) .....  
.....



7. (a) Write **BIOS** in full. (01 mark)

.....

(b) Explain the following booting processes:

✓ (i) Cold booting. (02 marks)

.....

.....

.....

.....

(ii) Warm booting. (02 marks)

.....

.....

.....

.....

8. (a) Name **one** example of a word processor. (01 mark)

.....

(b) Explain the following views in a word processor:

(i) Print Layout. (02 marks)

.....

.....

.....

.....

(ii) Read/fullscreen mode. (02 marks)

.....

.....

.....

.....



**Turn Over**

9. (a) Differentiate a **repeater** from a **switch** as basic networking devices. (02 marks)

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

(b) Outline **three** factors an organization should consider in order to have a Local Area Network. (03 marks)

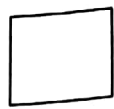
(i) .....  
(ii) .....  
(iii) .....

10. (a) Explain the term **E-learning**. (02 marks)

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

(b) Give **three** reasons for the increasing e-learning facilities in educational institutions. (03 marks)

(i) .....  
.....  
(ii) .....  
.....  
(iii) .....  
.....






11. (a) Define the term **information security**. (01 mark)

.....  
.....

(b) Describe any **two** ways of ensuring data and information security. (04 marks)

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

12. (a) Identify the following secondary storage devices. (03 marks)

Storage Device	Name of the device
	
	
	

(b) Outline **two** advantages of secondary storage devices. (02 marks)

(i) .....

(ii) .....



13. (a) Explain the use of each of the software below:

(i) Device Drivers. (02 marks)

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

(ii) Screen Savers. (02 marks)

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

(b) Name one example of an antivirus software. (01 mark)

.....

14. (a) Write Bcc in full. (01 mark)

.....

(b) Describe how you can use email services to do the following:

(i) Send a file from a storage device. (02 marks)

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

(ii) Send an email message you received to another person. (02 marks)

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



15. (a) Explain the concept of **Artificial Intelligence**. (02 marks)

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

(b) State **three** ways in which one can use the Global Positioning System (GPS). (03 marks)

(i) .....

(ii) .....

(iii) .....

16. (a) Explain the following terms as used in databases:

(i) **Primary key**. (02 marks)

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

(02 marks)

(ii) Record.

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

(b) Give **one** example of a database object.

(01 mark)

.....

17. (a) Define the term **Communication Protocol** in computer networking.

(02 marks)

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

(b) Give any **two** examples of Communication Protocol.

(02 marks)

(i) .....

(ii) .....

(c) A network device that converts digital signals into analog and vice versa is called a .....

(01 mark)

18. (a) List **three** functions of an Operating System.

(03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

(b) Give **two** basic components of a Graphical User Interface (GUI).  
(02 marks)

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



19. (a) (i) What is **wireless transmission**? (02 marks)

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

(ii) Give an example of wireless transmission (01 mark)

(b) Outline **two** benefits of wireless communication. (02 marks)

(i) .....

.....

(ii) .....

.....

20. (a) Suggest any **two** ways the speed of a computer can be improved.  
(02 marks)

(i) .....

.....

(ii) .....

.....

.....

(03 marks)

(b) Given the following ports;

- Serial
- Universal Serial Bus
- Network
- Parallel

Identify from the list, the appropriate port for each of the given uses below:

- (i) The port that transmits data, a byte at a time is a ..... port.
- (ii) The port that transmits data only a single bit at a time is a ..... port.
- (iii) The port on a computer where the RJ – 45 connector is attached is a ..... Port.



QN1.

a) Definition of a computer system

*Is a collection or set of functional components (hardware, software, communication devices, users) working together to manage data/information.*

b) Examples of portable computing devices

- *Laptops/mini laptops*
- *Electronic calculators*
- *Digital watches/smart watches*
- *Mobile phone/ smartphone*
- *PDA*
- *Tablet/ipad*
- *Notebook/netbook*
- *Palmtop*

Qn2

a) Storage media for the folder

*Hard disk/hard disk c/ Local disk c*

b) Conversion of size of the folder

*$3.15 \times 1024 \times 1024 = 3303014.4 \text{ bytes}$*

*Or*

*$3.15 \times 1000 \times 1000 = 3150000 \text{ bytes}$*

c) Identification of the subfolder where the files are stored

*Desktop*

d) Path

*C:\User\Student1\Desktop*

QN 3

a) Qualities of a good printer

- *Good resolution/good quality output*
- *Low power consumption*
- *Produce large number of pages/printouts per minute i.e fast printing speed*
- *Compatible with computing devices*
- *Cost effective in terms of maintenance*
- *Withstand dusty environment and strong vibrations*
- *Durable*
- *large memory space*

b) use of the following devices

i. *projector*

*Display / magnify/ convey/ show computer output to a wide screen*

ii. *speaker*

*Used to output/ produce/ give out sound or audio*

*QN 4*

- a) *true*
- b) *true*
- c) *false*
- d) *false*
- e) *true*

*QN 5*

a) *Distinction between system software and application software*

*System software is software that operates computer hardware and provides platform for application software to run*

*While*

*Application software are programs used to perform specific tasks for end users.*

b) *Categories of system software*

- *Operating system*

- *Utility software*
- *Programming languages*

#### QN 6

##### a) Meaning of Netiquettes

Acceptable moral guidelines/ Good practices / social/social behavior when communicating on the internet/ online/ network.

##### b) Netiquettes of the internet

- *Remember that you are sharing with humans*
- *Adhere to the same standard of behavior online that you follow in real life.*
- *Know where you are*
- *Respect other people's time and bandwidth.*
- *Keep flame/war under control*
- *Share expert knowledge*
- *Respect other people's privacy*
- *Be forgiving for other people's mistakes*
- *Do not abuse your power.*
- *Use proper language while communicating*
- *Be clear in your communication*

#### QN 7

##### a) Full form of BIOS

Basic input output system.

##### b) Explanation of booting process

###### i. Cold booting

*Is a process involving turning on or starting a computer that has been switched off.*

*Or*

*It helps in attaining the operative routine environment of the computer when it has been switched off.*

###### ii. warm booting

*Is a process of restarting/ resetting a computer which is turned on or operating.*

#### Qn 8

(a) *Examples of word processors*

- *Ms word*
- *Abi word*
- *Word perfect*
- *Wordstar*
- *k.word*
- *lotus word pro*
- *open office.org writer*
- *wordpad*
- *google docs*
- *wps word*
- *libre office write*

(b) *Explanation of the following views in word processors.*

i. *Print layout*

*Is a document view which allows the user to see and modify (Edit/format) the document.*

ii. *Read/full screen view*

*Is a view in which the writing tools and menus are hidden to give more room for full view of the page.*

*Qn 9*

a) *Difference of a repeater from a switch*

*A repeater is a communication device that amplifies/ rejuvenates or boosts signals due to attenuation.*

*While*

*A switch is a communication device in a network that joins devices together.*

b) *Factors to consider to have a LAN*

- *Data security level*
- *Size of the organization/number of users to serve*
- *Data traffic expected*
- *Network budget/costs involved*
- *Level of administrative support involved*
- *Nature of the organization*

- *Needs of the network*

*Qn10*

a) *Explanation for E-learning*

- *Is a learning process conducted over electronic media typically on the internet.*

b) *Reasons for increased E-learning facilities in educational institutions*

- *Greater access to education*
- *Education needs more technology*
- *E-learning offers more and better options*
- *Cost effectiveness*
- *E-learning is fun that motivates learners*
- *Makes learning convenient*
- *Due to changes in the nature of learning*
- *Saves time*
- *Reduces risks*

*Qn 11*

a) *Definition of information security*

*It is the protection of data/information against unauthorized access or destruction/loss*

b) *Ways of ensuring data and information security*

- *Full data backup*
- *Encryption of data*
- *Installation and update of antivirus*
- *Activating firewalls at different levels*
- *user authentication/user accounts settings*
- *Use passwords/ possessed objects*
- *Data masking through shielding or covering data*
- *Audit trails as a way of continuously analyzing data*
- *Apply security monitors*
- *Log files*
- *Introduce call back systems*

- *Activating a screen saver*

*Qn 12*

*(a) Identification of devices*

*Flash disk/ pendrive/memory stick*

*Memory card/SD card*

*Hard disk/ Hard disk drive*

*(b) Advantages of secondary storage*

- *Provide larger storage space in terms of storage units*
- *Provides permanent storage/ non volatile*
- *Cheaper in terms of cost per unit of storage (cost effective)*
- *They are portable*
- *Readily available*
- *More compatible with most computing devices*
- *Facilitate data sharing*
- *Provides data backup*

*Qn 13*

a) Explanation of the use of the following

i. Device driver

It enables the connected hardware to communicate or configure with the operating system

ii. Screen saver

- *Provides data security*
- *Prevents/reduces phosphor burn out/ ghosting*
- *Saves energy*
- *Provides entertainment*
- *Used as advertisement platform*

b) *Examples of antiviruses*

- *Avast*
- *Kaspersky*
- *Norton*

- *AVG*
- *Smadav*
- *Panda*
- *F-secure*
- *Mcafe*
- *Avira*
- *360 total security*
- *Dr. Solomon tool kit*
- *Windows defender*

*Qn 14*

a) Full form of BCC

*Blind Carbon copy*

- b) Description of using Email service to do the following:
- i. Sending a file from a storage device

Option I:

- *Log into an Email account*
- *Click on compose/open*
- *Type recipient's address*
- *Click attach button*
- *Browse a file from storage device*
- *Confirm attach file*
- *Click send button*

Option II:

- *Browse a file*
- *Right click on the file*
- *Go to share*
- *Select recipient's email option*
- *Type recipient email address*
- *send*

Option III:

- *browse a file*
- *right click on the file*
- *point to “send to” and select mail recipient*
- *type sender email address and recipient’s email address*
- *select send*

ii. *send an email message you have received to another person*

- *open the received email*
- *click on forward*
- *type recipient’s email address*
- *select send*

qn 15

a) *explanation of AI*

*Ability of machines to mimic/reason like/apply human intelligence*

*Or*

*Developing intelligence machines that work like human beings.*

b) *Ways in which one use the GPS*

- *Navigation*
- *Locating places*
- *Mapping (map development) or plotting/measuring size of an area*
- *Travel guide*
- *Timing (precise time measurement)*
- *Monitoring/surveillance*

Qn 16

a) *Explanation of terms in database*

i) *Primary key*

*A unique identifier of a record in a database table*

*Or*

*It is a field in a table which uniquely identifies a record/row in a table.*

ii) *Record*

*It is a collection of fields that define a given entity/entry.*

b) *Examples of a database object*

- *Table*
- *Query*
- *Form*
- *Report*
- *Macro*
- *modules*

*qn 17*

a) *definition of communication protocol*

*set of rules/procedures/guidelines that govern communication over a network or between devices.*

*Or*

*Set of instructions and standards that govern exchange of data/information on network.*

b) *Examples of communication protocols*

- *TCP*
- *TCP/IP*
- *IP*
- *HTTP*
- *FTP*
- *SMTP*
- *POP*
- *IMAP*

*QN 18*

a) *Functions of OS*

- *File management*

- *Booting of the computer*
- *Administering computer security*
- *Computer performance management*
- *Memory management*
- *Device management*
- *Scheduling of tasks*
- *Queing/ spooling of print jobs*
- *Provision of user interface*
- *Establishment of network connection*
- *Platform for running applications*
- *Resource management*

b) *Basic components of GUI*

- *Icons*
- *Menu*
- *Buttons*
- *Dialog box*
- *Windows*
- *Desktop*
- *Pointer*
- *Toolbars*

*Qn19*

a) *I) meaning of wireless transmission*

*Movement of signals from one device to another without physical connection/cable*

*Or*

*Transfer of data using microwaves, radio waves and infrared from one device to another.*

*Or*

*A form of transmission of signals through air or non physical media.*

iii) *Examples of wireless transmission*

- *Microwave*
- *Radio wave*

- *Infrared*
- *Bluetooth*
- *Wifi*
- *Satellite*
- *Xender*
- *Share it*
- *Share me*
- *Flash share*
- 
- *Cm transfer*
- *Wireless mouse*
- *Radio transmission*
- *remote control*
- *wireless modem*
- *mobile phone*
- *Wireless router*
- *Radio broadcast*

b) Benefits of wireless communication

- *Wireless media is flexible as compared to bounded media*
- *Wireless communication can take place via satellite even in remote areas that will not have high cost physical infrastructure like telephone lines*
- *Can span large geographical areas easily*
- *Provides easier extension of a network/convenient*
- *Relatively cheaper to set up and maintain*

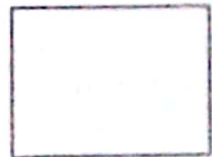
*Qn 20*

a) *Ways the speed of a computer can be improved*

- *Adding more memory*
- *Adding in a large capacity hard disk or second hard disk*
- *Removing/ deleting unwanted files*
- *Uninstalling unwanted programs*
- *Upgrading or changing to the faster processor*
- *Defragment the disk*
- *compress files*
- *Closing currently open application are not in use*
- *Scanning and removing viruses*
- *Restart a computer*
- *Free up space on partition that holds the os*

b) appropriate port

- parallel port
- serial port
- network port



Candidate's Name: .....

Signature: .....

Random No.					Personal No.		

(Do not write your School/Centre Name or Number anywhere on this booklet)

**S850/1**  
**Subsidiary Information**  
**and Communication**  
**Technology (ICT)**  
**Paper 1**  
**Nov./ Dec. 2020**  
**2 ½ hours**



**UGANDA NATIONAL EXAMINATIONS BOARD**

**Uganda Advanced Certificate of Education**

**SUBSIDIARY ICT**

**Paper 1**

**2 hours 30 minutes**

**INSTRUCTIONS TO CANDIDATES:**

*The paper is made up of twenty equally weighted questions.*

*Answer all the questions in this paper.*

*All answers should be written in blue or black ink in the spaces provided on the question paper.*

Questions	For Examiners' Use Only	
	Marks	Initials
1-2		
3-4		
5-6		
7-8		
9-10		
11-12		
13-14		
15-16		
17-18		
19-20		
<b>Total</b>		

Answer **all** questions in this paper.

1. (a) Suggest **one** way of opening an application program. (01 mark)

.....

- (b) A computer literate person is (01 mark)

.....

.....

- (c) Write **three** reasons why Information and Communication Technology is important. (03 marks)

(i) .....

.....

(ii).....

.....

(iii) .....

.....

2. (a) Give any **two** ways to protect a computer from electrical damage. (02 marks)

(i) .....

.....

(ii) .....

.....

- (b) Suggest any **two** measures you would take to prevent loss and /or damage of data in computers. (02 marks)

(i) .....

.....

(ii) .....

.....

(c) Give **one** reason why computers should be serviced. (01 mark)

.....  
.....



3. (a) Explain the term **Short Cut** as used in computers. (02 marks)

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

(b) Identify **three** limitations of using the desktop as a sole file storage location/directory. .. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

4. (a) A specialised device that moves the pointer on a computer screen is called the (01 mark)

.....

(b) Name **two** devices that serve as both input and output devices. (02 marks)

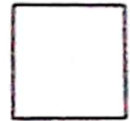
(i) .....

(ii) .....

- (c) What device can be used to capture information shown in the picture below? (02 marks)



5. Give examples of software under the following categories:



- (a) System Utility. (02 marks)

Examples; (i) .....

(ii) .....

- (b) Operating Systems. (02 marks)

Examples; (i) .....

(ii) .....

- (c) Programming Languages. (01 mark)

Example .....

6. (a) Describe the term **blog** as used in Internet. (02 marks)

.....

.....

.....

- (b) Explain the term **Cloud Computing**. (02 marks)

.....

.....

.....

(c) Give **one** advantage of cloud computing. (01 mark)

.....  
.....



7. (a) Write LAN in full. (01 mark)

.....

(b) Explain the following network models:

(i) Client-server. (02 marks)

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

(ii) Peer-to-Peer. (02 marks)

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

8. Identify **five** emerging technologies and innovations in the area of transport. (05 marks)

(i) .....

(ii) .....

(iii) .....

(iv) .....

(v) .....



9. The screen shot below shows a database object.

Student Bio Data			
Names	Kirya Doma	Std_No	0028
Dormitory	Magdalene	Parents Tel	0773776655
Co-curricular	Choir Member		
Matron remarks	Very noisy in the dormitory		

- (a) Name the database object shown. (01 mark)  
.....
- (b) Identify the field which would serve as a primary key. (01 mark)  
.....
- (c) Assign appropriate data types for the following fields: (03 marks)
- (i) Parents Tel: .....
- (ii) Matron remarks: .....
- (ii) Std\_No: .....

10. (a) Describe the term **digital divide**. (02 marks)

.....

.....

.....

.....

(b) Outline any **three** indicators of digital divide. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....



11. (a) Distinguish between high level programming languages and low level programming languages. (02 marks)

.....

.....

.....

.....

.....

.....

(b) Give **three** advantages of high level programming languages. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

12. (a) Outline any three advantages of a flash disk. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

(b) Suggest any two ways of creating more storage space on a flash disk. (02 marks)

(i) .....

.....

(ii) .....

.....



13. Write TRUE or FALSE against each statement from (a) to (e) in the table below. (05 marks)

STATEMENT	TRUE / FALSE
(a) Image viewer utility displays content of graphics when you double click.	
(b) Uninstaller removes a word document file from the computer system.	
(c) Disk defragmenter compiles technical information about hardware and software.	
(d) Disk scanner detects and corrects problems on hard disk.	
(e) Anti-virus utilities protect the physical access to the computer.	

14. (a) Explain the term Internet Service Provider (ISP). (02 marks)

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

(b) Give three examples of web browsers. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....



15. Identify five wireless communication media which can be used to connect network devices as follows:

(a) Within the same room. (02 marks)

- (i) .....
- (ii) .....

(b) Between users in the same city. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

16. (a) What is hacking as applied in ICT? (01 mark)

.....  
.....

(b) Explain the following internet crimes:

(02 marks)

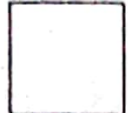
(i) Phishing.

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

(ii) Spamming.

(02 marks)

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



17. The table below shows results from an ICT class extracted from a spreadsheet application. Use it to answer questions (a) to (c).

	A	B	C	D	E	F
1	No.	Name	Assignment	Test	Examination	Average
2	1	Peter	56	74	89	
3	2	Lindah	82	45	85	
4	3	Rayyam	100	95	90	
5	4	Josephine	50	90	65	
6	5	Musa	60	57	80	
7	6	Amina	38	77	62	

(a) Write the formula that can be used to determine the average score for Peter. (02 marks)

.....  
.....

- (b) Describe the procedure you would follow to obtain the average scores of the other students using your formula in (a). (02 marks)

.....

.....

.....

- (c) What function would you use to position the students? (01 mark)

.....

18. Study the computer specifications in the table below and answer the questions that follow.

Computer specifications	Computer	
	A	B
Clock Rate	1.70GHZ	1.2 GHZ
Random Access Memory	2 GB	1000 MB
Hard Disk	2000 MB	5GB

- (a) Identify the computer which is faster. (01 mark)

.....

- (b) State two reasons to support your answer in (a). (02 marks)

(i) .....

.....

(ii) .....

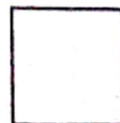
.....

- (c) Identify the computer with a higher storage capacity and give the reason why. (02 marks)

.....

.....

.....



19. (a) Define the term **Software package /suite.** (02 marks)

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

(b) (i) Give one example of a software package/suite. (01 mark)

.....

(ii) List any **two** components of your example in (b) (i). (02 marks)

.....  
.....

20. (a) Name any **two** network communication devices. (02 marks)

(i) .....

(ii) .....

(b) Give any **three** advantages of computer networks. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....



UGANDA NATIONAL EXAMINATIONS BOARD  
UACE 2020 DRAFT MARKING GUIDE  
SUB-ICT S850/1

1. (a) **Ways of opening an application.** (Any 1x1=1 mark)

- Right click on the shortcut  $\Rightarrow$  click open. *click start/windows button*
- All programs  $\Rightarrow$  select the program *Win + R + Command*
- Double click on the program icon/shortcut.
- Open a command prompt  $\Rightarrow$  type a command.  $\rightarrow$  Press enter.
- Use a task manager to open a program.
- Click on the program icon pinned on the task bar.
- Use voice recognition to open a program. *Command*
- Click on the Start button  $\Rightarrow$  on the menu, click on a program.
- Click on start button  $\Rightarrow$  type program name in the search box  $\Rightarrow$  press enter. *win type the keywords*

(b) **A computer literate person is one who uses/operates a computer to solve a problem.** (1 mark)

(c) **Reasons why Information Communication Technology is important.** (Any 3x1=3 marks)

- To form a basis for future employment.
- To facilitate learning of other subjects.
- To enable sharing of information.
- To facilitate academic research among students.
- To lay a foundation for further studies in the field of computing.
- To speed up business operations and development.
- To facilitate telecommunication.

2. (a) **Ways to protect a computer from electrical damage.** (Any 2x1=2 marks)

- Connect a computer to a surge protector/suppressor/power regulator.
- Connect a UPS to your computer.
- Always disconnect your computer from power when it is not in use.
- Install a lightening arrestor/conductor.
- Install a circuit breaker. *Switch off mains*
- Ensure proper wiring system.
- Ensure use of insulated cables.
- Avoid overloading the circuit.

(b) **Measures you would take to prevent loss and/or damage of data in computers.** (Any 2x1=2 marks)

- Backup important files.
- Install and regularly update antivirus software.
- Install/setup/put a password.
- Encrypt data.
- Apply data masking.
- Configure firewall.
- Set parental controls for example user accounts.
- ~~Write~~ protect data.

*undo delete*  
*power shut down of a computer*

- (Any 1x1=1 mark)
- (c) **Reasons why computers should be serviced.**
- To improve speed and general operation/performance of a computer.
  - To reduce risks of threats like sniffers, spyware, viruses.
  - To reduce likelihood of losing important data, files and/or software.
  - To prolong computer's life span.
  - To enhance/maintain computer's functionality.
  - To free up space. *Increase efficiency*
3. (a) **Explanation of a shortcut as used in computers.** (2 marks)
- It is a quick alternative way of performing a task on a computer.
- (b) **Limitations of using the desktop as a sole file storage location/directory.** (Any 3x1=3 marks)
- *Viruses can easily affect the system - (Vulnerability to viruses attacks)*
  - May lead a computer to slow down.
  - Likelihood of losing files in case of operating system crash.
  - The files are not automatically backed up.
  - Many files occupy the usable space for important icons (overcrowding space).
  - Files are easily exposed to un authorized people.
  - Files can accidentally be deleted.
4. (a) **Specialized device that moves the pointer.** (1 mark)
- Mouse, *Track Point, Trackball*
- (b) **Devices serving as both input and output devices.** (Any 2x1=2 marks)
- Digital Camera *Head set*
  - Touch screen
  - Smart board
  - Fax machine
- (c) **Device to capture information in the picture.** (2 marks)
- Barcode reader/Barcode scanner.
5. (a) **System utility:** (Any 2x1=2 marks)
- Examples:*
- Disk defragmenter.
  - Diagnostic utility.
  - Screen saver.
  - File viewer.
  - Sort utility.
  - Merge utility.
  - Copy utility/backup
  - Cryptographic utility.
  - Antivirus etc
- (b) **Operating systems:** (Any 2x1=2 marks)
- Examples:*
- MS DOS *DOS*
  - Mac OS
  - Solaris
  - Windows
  - Ubuntu
  - Android etc
- (c) **Programming languages:** (Any 2x1=2 marks)
- Examples:*
- FORTRAN *CH, C#*
  - BASIC
  - PASCAL
  - C
  - C++
  - Java
  - HTML
  - PHP
  - Machine language
  - Assembly language
  - PROLOG
  - Ada
  - Python
  - COBOL etc

6. (a) **Description of blog as used in internet.** (2 marks)  
 A website where users post information about a topic for discussion.
- (b) **Explanation of cloud computing.** (2 marks)  
 It is a practice of hosting, delivering and using of services online.
- (c) **Advantages of cloud computing.** (1 mark)
- Reduced cost of storage
  - Unlimited storage space. (Vast amount of storage)
  - Reliability (processing power, storage)
  - Boundaryless computing/ubiquitous computing
  - Access to a variety of resources.
  - Reduction of electronic waste.
  - Enhanced security on data.
7. (a) **LAN in full.** (1 mark)  
 Local Area Network
- (b) **Explanation:**
- (i) **Client-server:** (Any 1x2=2 marks)
- It is a network model/structure with one or more central computers/hosts that store data and manage resource being shared by other computers/clients.
  - A network model with a major computer/server/host that controls resources and client computers on a network.
- (ii) **Peer-to-Peer:** (2 marks)
- A network model where each computer acts as both a server and client.
8. **Emerging technologies and innovations in the area of transport.** (Any 5x1=5 marks)
- Self-driven cars. - Road Toll Control System & Travel Card
  - Automatic cars. - Road cameras (CCTV)
  - Autonomous cars with increased safety. - Auto Pilot
  - Use of Drones for emergency deliveries. - Elevation
  - GPS for vehicle tracking. - Track (bus) Scanners
  - Computerized diagnostic vehicle kit/tool.
  - Computerized traffic control. - Radar Control System
  - Electronic vehicles which are charged.
  - Online reservation and booking for transport tickets.
  - Smart cars with possibility of detecting danger.
9. (a) **Database object:** (1 mark)  
 Form
- (b) **Appropriate field for a primary key.**
- Std\_No (1 mark)
- (c) **Appropriate data types:**
- (i) Parents Tel: Text/short text (1 mark)
- (ii) Matron remarks: Memo/long text (1 mark)
- (iii) Std\_No: Text | Short text (1 mark)

10. (a) **Description of digital divide.** (2 marks)  
*inequality*  
 This is a social issue relating to the differing amount of information (gap) between those who have access to information communication technologies and those who do not. *gap*
- (b) **Indicators of digital divide.** (Any 3x1=3 marks)  
 ▪ Level of ICT usage. *computer literacy levels*  
 ▪ Percentage of internet users  
 ▪ Quality of ICT equipment used (computers and cell phones)  
 ▪ Amount of Information accessed.  
 ▪ Type of information accessed. *difference in network coverage*
11. (a) **Difference between high level programming languages and low level programming languages.** (Any 1x2=2 marks)  
 ▪ High level languages are human oriented while low level languages are hardware oriented.  
 ▪ High level languages require more memory while low level languages occupy less memory.  
 ▪ Low level languages are faster to execute while high level languages are slow in execution.
- (b) **Advantages of high-level programming languages.** (Any 3x1=3 marks)  
 ▪ They relate to natural languages making it easily understood/interpreted by humans.  
 ▪ It is quick to write/develop programs because some codes are automatically generated.  
 ▪ Machine independent. *user friendly*  
 ▪ Faster for a programmer to identify errors and fix them in a code.
12. (a) **Advantages of flash disks.** (Any 3x1=3 marks)  
 ▪ Provide quick access to data. *Fast access*  
 ▪ They are Plug and Play (PnP) – automatic driver installation.  
 ▪ Content can easily be edited. *Available in different storage capacity*  
 ▪ Information can be accessed in most computers (compatibility).  
 ▪ More Portable. *Can withstand rough handling compare*  
 ▪ Store relatively large amount of data. *flash disk*  
 ▪ Cheap in terms of unit per storage.
- (b) **Ways of creating more storage space on a flash disk.** (Any 2x1=2 marks)  
 ▪ Delete/remove un wanted files.  
 ▪ Move files to another storage medium.  
 ▪ Defragment a flash disk.  
 ▪ Compress files.  
 ▪ Formatting a flash disk
13. **statement True/False:** (each 1 mark) Total 5 marks  
 (a) True  
 (b) False  
 (c) False  
 (d) True  
 (e) False

14. (a) **Explanation of Internet Service Provider (ISP).** (2 marks)  
 ▪ Is a company that provides individuals and other companies access to internet and other related services.
- (b) **Examples of web browsers.** (any 3x1=3 marks)  
 ▪ Internet explorer *Microsoft edge*  
 ▪ Google chrome *Konqueror*  
 ▪ Opera *Phoenix*  
 ▪ Mozilla Firefox *Mosaic*  
 ▪ Safari  
 ▪ Netscape navigator  
 ▪ Chromium  
 ▪ Arora etc
15. **Wireless communication used to connect;**
- (a) **Within the same room:** (Any 2x1=2 marks)  
 ▪ Infrared/irDA  
 ▪ Radio waves
- (b) **Between users in the same city.** (Any 3x1=3 marks)  
 ▪ Micro wave  
 ▪ Radio waves  
 ▪ Satellite
16. (a) **Hacking as applied in ICT?** (1 mark)  
 - Un authorized access to information in a computer system.
- (b) **Explanation of internet crimes:**
- (i) **Phishing.** (2 marks)  
 Sending of fake emails intending to get personal details.
- (ii) **Spamming.** (2 marks)  
 Sending of unsolicited or junk emails.
17. (a) **Formula to determine the average score for peter.** (Any 1x2=2 marks)  
 $=\text{AVERAGE}(C2:E2)$  = Average(C2, D2, E2) =  $\text{SUM}(C2:E2)/3$   
 $= (C2+D2+E2)/3$  =  $\text{SUM}(C2:E2)/3$   
 $= (\text{SUM}(C2:E2))/3$  =  $\text{SUM}(C2, D2, E2)/3$
- (b) **Procedure to obtain average scores for other students using a formula.** (2 marks)  
 - Highlight all the cells, type the formula and then press Ctrl + Enter
- Copy and paste the formula to the rest of the cells.  
 ▪ Click the handle on F2 and drag it down to cell F7.  
 ▪ Double click the handle on F2 and autofill.
- (c) **Function to use to position the students.** (1 mark)  
 • Rank
18. (a) **The Computer which is faster.** (1 mark)  
 ▪ Computer A  
 ▪ Computer with clock rate of 1.70GHZ
- (b) **Reasons to support answer in (a).** (Any 2x1=2 marks)  
 (i) It has a faster clock rate and this also determines the processor speed.  
 (ii) It has a high Random-Access Memory which also contributes to the computer's processor speed.
- (c) **Computer B because it has higher Hard disk capacity than computer A.**  
 (Computer mentioned 1 mark)  
 (Reason 1 mark)  
 Total 2-marks

19. (a) **Definition of software package/suite.** (Any 1x2=2 marks)

- A group/collection of programs sold as a single unit.
- Two or more software programs bundled and sold together.

(b) (i) **Examples of software packages/suite.** (Any 1x1=1 mark)

- MS office suite (MS works)
- Adobe suite
- Open office.org suite
- Kingsoft suite
- WPS suite
- Lotus suite

(ii) **components of your example in (b)(i).**

**MS office:**

- MS office word
- MS PowerPoint
- MS Excel
- MS publisher

- MS Access
- Microsoft outlook
- MS InfoPath
- Groove

**Lotus suite:**

- Lotus word pro
- Lotus 1,2,3
- Lotus freelance
- Lotus approach

**Adobe suite:**

- Adobe Photoshop
- Adobe Page maker
- Adobe Illustrator
- Adobe InDesign

- Adobe Aftereffect.
- Adobe Premiere.
- Adobe Audition.

20. (a) **Network communication devices.**

- NIC (Phone)
- MoDem (Computer)
- Hub (for machines)
- Switch (Radio cast)

- Bridge
  - Router
  - Gateway
  - Repeater
- (Any 2x1=2 marks)
- (Any 3x1=3 marks)

(b) **Advantages of computer networks.**

- Facilitate faster access to information.
- Facilitate faster sharing of computer resources.
- Minimizes cost of purchasing hardware for every computer.
- Central management of computer resources.
- Enhanced information security.
- Reduced costs of study through E-learning.
- Faster communication.

13, 14, 15

16, 17, 18

End



Candidate's name: .....

Signature: .....

Random No.					Personal No.		

(Do not write your School/Centre name or Number anywhere on this booklet)

**S850/1**  
**Subsidiary Information**  
**and Communication**  
**Technology (ICT)**  
**Paper 1**  
**Nov./Dec. 2019**  
**2½ hours**



**UGANDA NATIONAL EXAMINATIONS BOARD**

**Uganda Advanced Certificate of Education**

**SUBSIDIARY ICT**

**Paper 1**

**2 hours 30 minutes**

**INSTRUCTIONS TO CANDIDATES:**

*Answer all questions in this paper.*

*The paper is made up of twenty equally weighted questions.*

*All answers should be written in blue or black ink in the spaces provided on the question paper.*

For Examiners' Use only																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total

*Answer all questions in this paper*

1. (a) Define the term computer. (02 marks)

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

(b) Give any **three** peripheral devices of a desktop computer. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

2. (a) State **one** reason why a computer laboratory should have: (03 marks)

(i) A good lighting system.  
.....  
.....

(ii) A well ventilated environment.  
.....  
.....

(iii) Appropriate furniture.  
.....  
.....

(b) Give **two** measures a computer laboratory technician should put in place to improve on the electricity power security. (02 marks)

(i) .....

(ii) .....

3. Outline the negative impact of ICT on the following sectors:

(a) Economic sector. (02 marks)

(i) .....

(ii) .....

(b) Social sector. (03 marks)

(i) .....

(ii) .....

(iii) .....

4. (a) Describe the booting process of a computer. (03 marks)

.....

.....

.....

.....

.....

.....

(b) State **two** possible consequences a computer may encounter whenever improper shut down is done. (02 marks)

(i) .....

.....

(ii) .....

.....

5. Identify the following input devices: (05 marks)



A



B



C



D



E

A. ....

B. ....

C. ....

- D. ....
- E. ....

6. (a) Differentiate between **System files** and **Document files**. (02 marks)

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

(b) Give any **three** circumstances under which a computer user may choose the option **save as** from a file menu. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

7. (a) Distinguish between **primary storage** and **secondary storage**. (02 marks)

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

(b) Name **one** example of primary storage and **two** examples of secondary storage.

(i) Primary .....

(01 mark)

(ii) Secondary .....

.....

(02 marks)

8. (a) Describe a Graphical User Interface (GUI). (02 marks)

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

(b) State **one** function of each of the following desktop icons: (03 marks)

(i) My computer. ....

(ii) Recycle bin. ....

(iii) My documents. ....

9. Define the following terms in relation to computer data processing:

(a) Processor speed. (02 marks)

(b) Fetching. (01 mark)

(c) Decoding. (02 marks)

10. (a) Explain any **two** elements of the "off-the-shelf" software. (04 marks)

(i) .....

(ii) .....

(b) Give **one** example of the "off-the-shelf" software. (01 mark)

11. (a) List any **two** requirements for Internet connection. (02 marks)

(i) .....

(ii) .....

- (b) Outline **three** advantages of Internet connectivity. (03 marks)
- (i) .....
  - (ii) .....
  - (iii) .....

12. (a) State **one** function of each of the following utility programs: (03 marks)
- (i) Diagnostic utility. ....
  - (ii) File Compression Utility. ....
  - (iii) Antivirus utility. ....

- (b) Outline **two** ways of reducing the spread of computer viruses. (02 marks)
- (i) .....
  - (ii) .....

13. (a) Write WWW in full as used in Internet technology. (01 mark)

- (b) Distinguish between a **Web browser** and a **Search engine**. (02 marks)

- (c) Give an example of a: (02 marks)
- (i) Web browser .....
  - (ii) Search engine .....

14. (a) Differentiate between **IP address** and **Domain name**. (02 marks)

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

(b) Describe each of the following protocols in relation to data communication:

(i) Simple Mail Transfer Protocol (SMTP). (01 mark)

.....  
.....

(ii) Post Office Protocol (POP). (01 mark)

.....  
.....

(iii) Hypertext Transfer Protocol (HTTP). (01 mark)

.....  
.....

15. (a) Outline any **three** violation of computer ethics usage by computer users. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

(b) Suggest **two** measures that should be put in place to guard against information piracy in an organization. (02 marks)

(i) .....

.....

(ii) .....

.....

16. List **five** elements of data communication. (05 marks)

(i) .....

(ii) .....

(iii) .....

(iv) .....

(v) .....

17. The table below shows a budget for an introduction ceremony.

	A	B	C	D	E
1	ITEM	UNIT COST	QUANTITY	TOTAL COST IN SHS	TOTAL COST IN £
2	Cultural dress	180,000	2		
3	Food	3,500	150		
4	Decoration	1,200,000	1		
5	Soda	19,000	13		
6	Mineral water	15,000	5		
7	Exchange rate of £1	4,630			

(a) Which computer application was used to design the given budget?  
(01 mark)

(b) Identify the cell formatting feature which was applied to contents in D1 and E1.  
(01 mark)

(c) Write down the formula that would be used to compute:

(i) TOTAL COST in Shillings (Shs). (01 mark)

(ii) TOTAL COST in pounds (£). (Use the exchange rate in cell B7). (02 marks)

18. Describe any five tasks that are performed by digital forensic specialists.  
(05 marks)

(i) .....

(ii) .....

(iii) .....

(iv) .....

(v) .....

19. (a) State the use of each of the following features in a presentation: (03 marks)

(i) Slide looping.

.....  
.....

(ii) Slide transition.

.....  
.....

(iii) Hyperlinks.

.....  
.....

(b) Give **one** advantage of using the following in presentations: (02 marks)

(i) Handouts.

.....  
.....

(ii) Notes pages.

.....  
.....

20. (a) Outline any **two** uses of a server in a computer network. (02 marks)

(i) .....

.....

(ii) .....

.....

(b) Name **three** types of computer networks. (03 marks)

(i) .....

(ii) .....

(iv) .....

## UACE SUB ICT DRAFT MARKING GUIDE

### 1. a) Definition of the term computer

The computer is an electronic device that operates under instructions/ programs to accept data, input, and processes or manipulates data, to generate/ output information and stores results for future use.

### b) Peripheral devices for desktop computer

Keyboard	Scanner	Light pen/digital pen
Mouse	Projector	External touchpad
Monitor	Gamepad	Digital camera
Modem	External speaker	Joystick
Microphone	External DVD drive	PC camera
Trackball	External hard disk	Barcode readers
Printer	Flash disk	

### 2. a) Reasons why a computer lab should have the following

#### i) A good lighting system

To guard against eye strain

To avoid unnecessary damages to the lab activities

To enable proper surveillance or monitoring of users in the lab

To enable proper vision

#### ii) A well ventilated environment

To have enough fresh air to avoid suffocation

To avoid over heating o machines

For better aeration

#### iii) Appropriate furniture

- To prevent devices from falling down
- To guard against irritable desk syndrome
- Provides enough working space
- To guard against bogy strains/ pain
- For proper installation of hardware devices( laying cables under tables)
- Provide ergonomics/ better posture

#### b) Measures to improve on electricity power security

- ✓ Installation of UPS
- ✓ Replacing old cables with new cables
- ✓ Installation of circuit breakers
- ✓ Proper connection of cables
- ✓ Installation of an earthing cable
- ✓ Use or installation of surge suppressors/ stabilizer/ protectors
- ✓ Installing a power fuse
- ✓ Avoid over loading of sockets
- ✓ Insulation of cables
- ✓ Installation of alternative sources of power e.g. solar, biogas

- ✓ Turning off the power switches when no device is in use
- ✓ Installation of fire extinguishers

3. a) **Negative impacts of ICTs on**

i) **Economic sector**

- Loss of jobs/ unemployment
- Expensive to run/ maintain
- Economic fraud/ theft
- Economic forgery of documents / cheques/receipts
- Over production which lowers profit margins
- Insecurity
- Piracy
- Defamation/ insult/ denouncement
- E-money laundering
- Increased cost of socialization
- SME(small and medium enterprises) are outcompeted due to mass production

ii) **Social sector**

- ❖ Digital divide/ split
- ❖ Moral degeneration/ homosexuality/ indecent dressing
- ❖ Erosion of culture
- ❖ Addiction to ICTs
- ❖ Reduced physical activity
- ❖ Reduced personal interaction/ face to face interaction
- ❖ Increased cost of specialization
- ❖ Increased computer crimes (piracy, flame wars, hacking, cracking)

4. a) **Booting process of a computer**

i) switching on power sources

The computer goes through POST to check whether all computer hardware components are working properly

BIOS is executed i.e. checking on system configurations like memory, drives

The operating system (bootstrap) is loaded in RAM and the desktop displays

ii) Switch on the power sources

Switch on the monitor

Switch on the system unit

**b) Consequences of improper shut down of a computer**

Loss of data

System files can be corrupted

Crashing of the Hard disk

5. **Identifying input devices**

- A. mouse
- B. track point
- C. touch pad/ track pad
- D. joystick
- E. light pen/ stylus pen/ digital pen








**6. a) Differences between system files and document files**

System files are files used to run hardware and the application programs WHILE document files are files created by the use of the application programs

**OR**

System files are files that cannot be modified, altered under normal circumstances WHILE document files can be modified, compressed, change format using the application that was used to create them

**b) Circumstances to use “save as” option**

-  When renaming a file
-  When changing a file location
-  When saving the file for the first time
-  When the user wishes to create another copy of the same time
-  When changing the file content to different formats
-  When the user wants to get a copy in a different location
-  When you want to create a copy with different names

**7. a) Distinguish between primary storage and secondary storage**

Primary storage is a temporary /volatile storage that is directly accessed by the CPU while secondary storage is a long term /permanent storage that is not directly accessed by the CPU and it is not volatile

**b) Examples of storage**

**i. primary**

ROM	Virtual memory
Cache memory	CMOS memory
Register	Buffer

**ii. Secondary**

Hard disk /hard disk drive	Flash disk /memory stick
CD /CD ROM	USB thumb drive
DVD /DVD ROM	Jaz disk
Magnetic tape	Zip disk
Memory card /SD card	Micro tiche
Solid state drive /Disk [SSD]	Micro film
Floppy diskette	Punched card
Blue ray disc /CD with high capacity of about 8GB	

**8. Description of Graphic User Interface**

Is an interface that uses windows, icons, menus and pointing devices for a user to enter commands into the computer system

**OR**

An interface that allows a user to manipulate or interact with the computer using a pointing devices or a mouse

**b. Functions of desktop icon**

**i. My computer**

- To quicken access to computer directories
- To explore computers

**iii. Recycle Bin**

To provide quick access to deleted files and folders

To restore deleted files

To hold or store deleted files and folders

**iv. My documents**

To provide quick access to files and folders

To provide default storage location for files

**9. Defining terms**

**a. Processor speed**

The rate at which the central processor cycles information

The rate at which the CPU executes instructions in given time

Amount of data the computer executes per second

**b. Fetching**

The process of getting /obtaining /retrieving data from memory by the CPU

**c. Decoding**

The process translating instruction into the commands that the computer interprets

**10. a) Explaining elements of off the shelf software**

It is readily available anytime it is needed from shops /kiosks /venders

It is generic /non –specific in nature since it performs a variety of tasks

It is error free since it is subjected to multiple tests before it is finally into on the market

It occupies a lot of storage space since it contains many modules /features

It is an independent machine since it is designed to run on many /different /any platforms /machines

It is distributed with a license since there is incurrence of costs

It is not altered or edited by users since it is provided when it is ready made

**b) Examples of off the shelf**

MS publisher

MS groove

Visi calc

MS word

Windows media

Lotus 123

MS powerpoint

player

Km player

MS access

Adobe InDesign

PCDJ

MS excel

Quattro pro

Windows

**11. a) Requirements for internet connection**

ISP

Gateway server

Modem

Router

Protocol


**OR**


Wifi protocol

ISP


Computer/ smartphone






**b) Advantages of internet connectivity (not uses/ functions)**

 Speeds up communication

 Reduction in costs of sharing

 There is improved data and information security

 Online adverts are able to reach a bigger audience quickly

-  Business transactions can be conducted at anytime anywhere
-  There is access to a wider range of information online that facilitates research
-  Online education is convenient for study at ones pace
-  There is reduced cost of storage of data through cloud computing
-  Improved monitoring of gov't programs at all levels through e-governance

## 12. functions of

### i) **diagnostic utility**

Identifies the problem about computer hardware and software and compiles/ prepares a report on identified problem

### ii) **file compression utility**

To reduce/ shrink/ decrease/ condense the size of a file to create space for additional files

### iii) **Anti-virus utility**

- i) Scans files for malware/ virus infection
- ii) Blocks virus intrusion
- iii) Cleaning or repairing infected files
- iv) Detects and alerts presence of malware
- v) Removes malware from the computer memory or storage

### **b) Ways of reducing the spread of computer viruses**

- i. Do not boot your computer with the CD in the drive
- ii. Scan all storage media before use
- iii. Install updated antivirus software to a computer system
- iv. Opening /downloading files from known/ trusted sources
- v. Use software from trusted sources/ vendors
- vi. Configure the firewalls
- vii. Share devices from known sources
- viii. Disable automatic opening of e-mail attachments
- ix. Disable auto play of CDs

## 13. a) WWW in full

World Wide Web

### **b) Distinguish between a web browser and a search engine**

Web browser is a tool used to fetch/ decode/ format and display content in web pages or HTML documents WHILE a search engine is a tool used to search for information on the WWW or on the internet using a keyword



**OR** a search engine is a web based tool that enables users to locate information on the WWW or on offline databases basically using a keyword

### **c) Examples**

#### **i) Web browser**

- |  |                                     |                               |
|--|-------------------------------------|-------------------------------|
| <input type="radio"/> Internet explorer  | <input type="radio"/> Google chrome | <input type="radio"/> Safari  |
| <input type="radio"/> Mozilla firefox    | <input type="radio"/> UC monkey     | <input type="radio"/> Slimjet |
| <input type="radio"/> Netscape navigator | <input type="radio"/> Opera mini    |                               |
|  | <input type="radio"/> UC browser    |                               |

#### **ii) Search engine**

- |  |   |   |
|--|---|---|
|  Google |  Yahoo |  Ask |
|--|---|---|


 AOL


 Duckduck

 Facebook



 Twitter

 Bing

 Baidu

 Avafind

 Yandex

#### 14. a) Distinguish between IP address and Domain name

An IP address is a number that uniquely identifies each computer or and device on a network e.g. 238.17.159.4 WHILE a domain name is a unique text version of the address used to identify a specific webpage or pages

#### b) Description of the protocols

##### i) Simple mail transfer protocol

A protocol for sending e-mail messages between computers/ clients

##### ii) Post office protocol

A protocol used to retrieve mail messages from a mail server

##### iii) Hypertext transfer protocol

A protocol used by a web server to allow web pages to show in a web browser

OR a protocol for transferring hypertext/ web page files over the WWW

#### 15. a) variations of computer ethics usage by computer users

- ✓ Selling duplicated copies of copyrighted software/ software piracy
- ✓ Plagiarism (use of other peoples work as your own)
- ✓ Industrial espionage (picking information from one industry to another)
- ✓ Phishing
- ✓ Vishing
- ✓ Eavesdrop
- ping
- ✓ Tapping
- ✓ Spread of viruses
- ✓ Defamation
- ✓ Cyber terrorism
- ✓ Data theft
- ✓ Hacking
- ✓ Cracking
- ✓ Spoofing
- ✓ Spamming
- ✓ Snoofing
- ✓ Deletion of data
- ✓ Alteration of data

#### b) Measures to guard against information piracy

- Use of audit trails
- Data encryption
- Use of biometrics
- Use of passwords
- Seeking of copyrights or patent rights
- Apply user levels to data
- Data masking
- Activate firewalls

#### 16. elements of data communication

Sender  
Message  
Medium  
Receiver  
Protocol

#### 17. a) application used to design the given budget

ms excel

lotus 123

visi calc

kspread

supercalc

apple numbers

open office.org.calc

**b) cell formatting feature**

wrap text

**c) formula for total cost in shillings**

=product(B2,C2)

=product(B2:C2)

=B2\*C2

**d) formula for total cost in pounds**

=D2/\$B\$7

=D2/B7

=D2/4630

=(B2\*C2)/B7

**18. Description of five tasks performed by digital forensic specialists**

- ❖ Biometric investigation
- ❖ Data analysis
- ❖ Digital intelligence
- ❖ Condoning off the crime scene
- ❖ Recovering data from damaged or erased hard drives
- ❖ Reconstructing the crime scene
- ❖ Tracking hackers and other computer attacks
- ❖ Gathering and maintaining evidence
- ❖ Writing and reviewing investigative reports
- ❖ Working closely with police officers and detectives
- ❖ Transfer data into a form that can be used for legal purposes and testify in courts of laws
- ❖ Train investigators to stay up to date in the current events in the ICT world

**19. Uses of the following features**

**i. Slide looping**

it makes presentations run continuously /repeatedly until escape button is pressed

**ii. Slide transition**

it determines how the slide appears /enter and disappear /exit off the screen

it animates the appearance and disappearance of the slides in a presentation

**iii. Hyperlinks**

It enables connections from one slide to another location in or outside the presentation

b. Advantages of using the following in presentation

**[i] Handouts** (give the benefits of having slides printed on one page)

Reduces on wastage of paper by printing multiple slides on one page

It reduces on the bulk of the presentation printouts

It saves time of printing

It saves costs of printing (ink ,power ,electricity and depreciation of the pointer)

**[ii]. Notes page**

It enables inclusion of extra notes on the slide

It enables one to review speaker notes and slides content at the same time

**20. a) Uses of server in a camp network**

- Provides access to camp network resources(documents printers)
- Provides central management place for computer on the network
- It responds to client requests and provides solution
- Administers network security since they run firewall and control systems
- Provides for data backups

**b). Types of computer networks**

- Personal Area Network (PAN)
- Local Area Network (LAN)
- Campus Area Network (CAN)
- Metropolitan Area Network (MAN)
- Wide Area Network (WAN)

Candidate's name.....

Signature .....

Random No.					Personal No.		

*(Do not write your school/Center Name or Number anywhere on this booklet)*

**S850/1**  
**Subsidiary Information**  
**and Communication**  
**Technology**  
**Paper 1**  
**Nov./Dec.2018**  
 2<sup>1</sup>/<sub>2</sub> hours



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
 2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper*

For Examiners ' Use Only																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

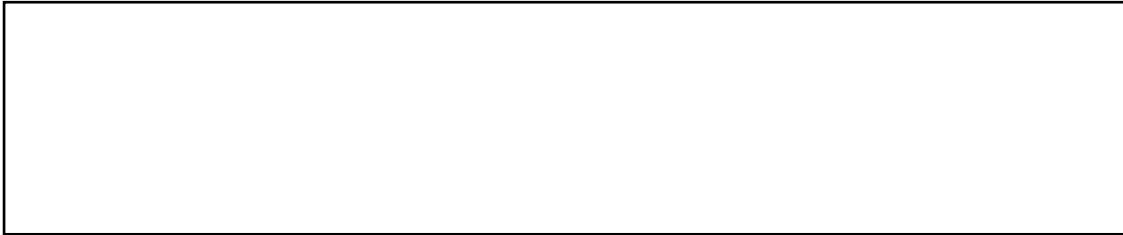
1. (a) List **three** major specifications one would consider when buying a laptop computer. (03 marks)

(i) .....

(ii).....

(iii).....

(b) Illustrate the information processing cycle. (02 marks)



2. (a) Distinguish between cold booting and warm booting. (02 marks)

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

(b) Give **three** circumstances under which a computer can be warm booted.

(03 marks)

(i) .....

.....

(ii).....

.....

(iii).....

.....

3. (a) What is Information and Communication Technology (ICT)? (02 marks)

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

(b) Outline any **three** measures that can be taken to prevent environmental degradation through the use of ICT. (03 marks)

- (i) .....
- (ii).....
- (iii).....

4. (a) Give **two** reasons why file management is important in a computer system. (02 marks)

- (i) .....
- .....
- (ii).....
- .....

(b) List **three** operations which can be performed on a file. (03 marks)

- (i) .....
- (ii) .....
- (iii) .....

5. (a) Explain the term **troubleshooting** as used in computers. (02 marks)

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

(b) State **three** ways in which one can troubleshoot a computer that has failed to start. (03 marks)

- (i) .....
- .....
- (ii).....
- .....
- (iii).....
- .....

6. (a) Define an input device. (01 mark)

.....  
.....

(b) Name **two** basic input devices associated with common desktop computers. (02 marks)

(i).....

(ii).....

(c) Identify an input device for each of the following data. (02 marks)

(i) Sound.....

(ii) Images.....

7. Outline any **three** functions of an operating system. (03 marks)

(i) .....

.....

(ii) .....

.....

(iii) .....

.....

(b) Name any **two** operating system softwares. (02 marks)

(i) .....

(ii) .....

8. Ali has a DVD full of data and would like to transfer the data to CDs. The capacity of the DVD is 4.7 GB and each CD is 700MB. Calculate the number of CDs he would need to transfer all his data. (05 marks)

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

9. (a) Define the term **Tailor-made software**. (01 mark)

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

(b) Outline any **four** qualities of good application software. (04 marks)

(i) .....

.....

(ii).....

.....

(iii).....

.....

(iv).....

.....

10. (a) Write the following computer abbreviations in full. (02 marks)

(i) CPU.....

(ii) ALU.....

(b) State the role of each of the following CPU components. (03 marks)

(i) Bus.....

.....

(ii) Control Unit.....

.....

(iii) Registers.....

.....

11. (a) Distinguish between utilities and application software. (02 marks)

.....

.....

.....

.....

(b) Give **three** examples of utility programs. (03 marks)

- (i) .....
- (ii).....
- (iii).....

**12.** Explain the following as applied to Internet:

(a) Hotspot. (02 marks)

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

(b) Internet Service Provider. (01 mark)

.....  
.....

(c) Search Engine. (02 marks)

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

**13.** Give **five** symptoms of a computer infected by a virus. (05 marks)

- (i) .....
- .....
- (ii).....
- .....
- (iii).....
- .....
- (iv).....
- .....
- (v).....
- .....

**14.** (a) Give **two** reasons to justify ownership of institutional websites. *(02 marks)*

(i) .....

(ii).....

(b) (i) What is a web browser. *(01 mark)*

.....

(ii) Under what circumstances can someone use a Uniform Resource Locator (URL) in a web browser? *(02 marks)*

.....

**15.** Give any five advantages of using automation in an industry. *(05 marks)*

(i) .....

(ii).....

(iii).....

(iv).....

(v).....

**16.** (a) Define data communication. *(01 mark)*

.....

(b) State any **four** requirements for setting up a computer network. (04 marks)

(i).....

(ii).....

(iii).....

(iv).....

17. For questions (a)-(e), fill in the missing words from the list below:(05 marks)

Formula bar

Worksheet

Active cell

Workbook

Cell

Column

(a) The.....is the intersection of a column and a row.

(b) The content of a current cell is also displayed in the.....

(c) The .....is one with a thicker boundary and is the insertion point in a spreadsheet.

(d) The cell address of the current is displayed in the.....

(e) A spreadsheet file is referred to as.....

18. (a) Give **three** disadvantages of electronic communication. (03 marks)

(i) .....

.....

(ii).....

.....

(iii).....

.....

(b) Name any **two** manual communication methods. (02 marks)

(i) .....

(ii).....

19. (a) Give **two** situations under which electronic presentations would be used. (02 marks)

(i).....  
.....

(ii).....  
.....

(b) State three advantages of using electronic presentations over the traditional chalk and talk. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

20. (a) Differentiate between intranet and extranet. (02 marks)

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

(b) Define a Local Area Network (LAN). (02marks)

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

(c) Suggest an area network which is restricted to connecting users in a city. (01 mark)

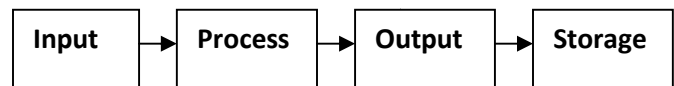
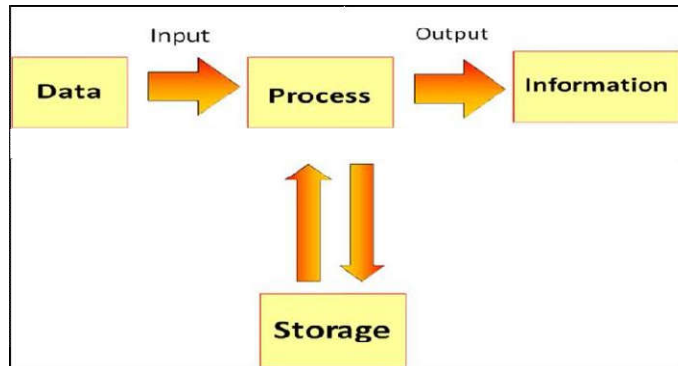
.....

**END**

**1a) List three major specifications one would consider when buying a laptop computer.**

Processor speed/power/model/type  
Amount of memory installed (RAM)  
Hard disk space/amount of storage space  
Ability to communicate with other peripheral hardware  
VGA capacity  
Screen specifications-resolution and size  
Batter life span  
Compatibility with software-operating systems  
Laptop size

**b) Illustrate the information processing cycle.**



**2a) Distinguish between cold booting and warm booting**

- Cold booting refers to starting a computer that had been powered off completely whereas warm booting refers to restarting a computer that is already powered on or running.

**b) Give three circumstances under which a computer can be warm booted.**

- When the computer freezes-memory is full
- When the computer freezes-memory is hangs (does not respond)-CPU overheated
- After installation of a new software (application or utility)
- When a peripheral or hardware component has failed to function/work
- During/After installation of operating system.
- After changing use control settings(CMOS/BIOS settings)/computer configurations
- When a user wants to clear a malicious infection like malware, spyware, viruses that are in memory
- When a user wishes to switch from one operating system to another (Multiple O.S)
- After software update
- After software upgrade
- After uninstalling software
- After uninstalling hardware
- After installing a new hardware
- When the computer system slows down
- When there is suspected system tapping
- After malware/virus scanning
- When a deadlock occurs
- Before Installing software
- When application software fails to work
- When power voltage suddenly lowers
- To activate a boot scan
- After performing a system restore

- During troubleshooting

### 3a) What is information and communication technology (ICT)?

- *A collection of related technological tools used to create, store, manage and disseminate information.*

### b) Outline any three measures that can be taken to prevent environmental degradation through the use of ICT.

- *Minimize the use of paper by using the internet to send e-mails than physical letters*
- *Through properly recycling, disposing off of e-waste.*
- *Sensitize people about environmental management through social media platforms*
- *Through use of Google maps to spot areas where degradation has occurred so as to mitigate the effect*
- *Through use of television talk shows to sensitize people about environmental management*
- *Through use of radio announcements to disseminate information about environmental management*
- *Through use of pop-up messages sent to phone to alert or remind people about environmental management*
- *Through use of drone to plant trees, spray, irrigate, put off fire in hard to reach areas*
- *Through use of grid computing*
- *Through use of virtualization of computing hardware*
- *Through use of low power hardware like LCD monitors and laptops*
- *Through use of cloud computing*
- *Through developing bio-degradable computing devices*
- *Switch off hardware when not in use*

### 4a) Give two reasons why file management is important in a computer system

- *To improve file security through passwords and file conversions*
- *To free up storage space for more files through file compressions*
- *For quick transfer of files*
- *To quickly access files through grouping files and naming files*

### b) List three operations which can be performed on a file

- |  |   |
|--|---|
| ▪ <i>Creating a file</i>               | ▪ <i>Zip or compress a file</i>               |
| ▪ <i>Opening a file</i>                | ▪ <i>Sorting files</i>                        |
| ▪ <i>Updating a file</i>               | ▪ <i>Combine/split a file</i>                 |
| ▪ <i>Deleting a file</i>               | ▪ <i>Encrypt a file</i>                       |
| ▪ <i>Closing a file editing a file</i> | ▪ <i>Backup a file</i>                        |
| ▪ <i>Sending a file</i>                | ▪ <i>Restore a file to a previous version</i> |
| ▪ <i>Converting a file</i>             | ▪ <i>Share a file</i>                         |
| ▪ <i>Printing a file</i>               | ▪ <i>Scan a file</i>                          |
| ▪ <i>Saving a file</i>                 | ▪ <i>Hide a file</i>                          |
- *Drag a file: method of moving a file from one location to another on the screen by use of a mouse.*
  - *Creating a duplicate of a file*
  - *Move/cut a file: transferring a file form one location to another*

**5a) Explain the term troubleshooting as used in computers**

- *Troubleshooting is a process of identifying and solving/fixing a computer problem*

**b) State three ways in which one can troubleshoot a computer that has failed to start**

- *Remove/replace/re-fix properly hardware like keyboard, mouse, display device, RAM chips, bus connections*
- *Start the computer from an external startup disk*
- *Repair the operating system*
- *Remove any external storage media like flash disks at start-up*
- *Ensure the power connections are properly fixed*
- *Ensure the computer is connected to required power voltage amount*
- *Restart the computer to correct any software problems before it completes the boot process.*
- *Run properly recommended system settings*

**6a) Define an input device**

- *An input device is a device used to feed/enter data and instructions into a computer.*

**b) Name two basic input devices associated with common desktop computers**

- *Mouse*
- *Keyboard*

**c) Identify an input device for each of the following data**

*Sound-Microphone*

*Images-Camera/Camcorder/Scanner*

**7a) Outline any three functions of an operating system**

- *Allocating system resources*
- *Offering data and software security*
- *Monitoring system performance*
- *Establishing network connections*
- *Providing a platform for applications to run*
- *Booting the computer*
- *Memory management*
- *Configuring devices*
- *Providing the user interface*
- *Spooling print jobs*
- *Managing storage and storage media*
- *Error management*

**b) Name any two operating system software**

- *Disk operating system*
- *Windows operating system*
- *UNIX*
- *LINUX*
- *Solaris*
- *Google operating system*
- *Android*

**8) Ali has a DVD full of data and would like to transfer the data to CDs. The capacity of the DVD is 4.7GB and each CD is 700MB. Calculate the number of CDs he would need to transfer all his data.**

- *1 GB = 1073741824*
- *1MB = 1048576*
- *4.7GB = 4.7\*1073741824 = 5046586573*
- *700MB = 700\*1048576 = 734003200*

- $5046586573/734003200 = 6.875428571$
- 7 CDs would be needed to store 4.7GB of data

**9a) Define the term tailor-made software**

- *Tailor-made software is software designed at a user's request in order to meet the user's particular needs*

**b) Outline any four qualities of good application software**

- *Should be error free-operate without bugs*
- *Should provide help incase of user errors*
- *Should be flexible*
- *Should be compatible or machine independent*
- *Should not stop working no matter the errors made by the user-robust*
- *Should be easy to use*
- *Should be easy to learn*
- *Should be easy to update/upgrade*
- *Should have user manuals and documentation*
- *Should be reliable*
- *Should be capable of displaying error messages to the users*
- *Should be scalable-easy to change to meet user needs*
- *Should be interoperable-work with other software*
- *Should be accurate in retrieving results*
- *Should be portable-work on multiple operating systems*
- *Should be efficient*
- *Should be readily available*
- *Should be authentic/genuine/licensed*

**10a) Write the following computer abbreviations in full**

**CPU**

- *Central processing unit*

**ALU**

- *Arithmetic logic unit*
- *Arithmetic and logic unit*

**b) State the role of each of the following CPU components**

**Bus**

- *Carries data and instruction between different computing components*

**Control unit**

- *Manages the activities in the CPU*
- *Fetches instructions*
- *Decodes instructions*
- *Executes instructions*

**Registers**

- *Temporarily hold data and instructions needed by the CPU*
- *Helps the CPU to access data and instructions quickly*

**11a) Distinguish between utilities and application software**

- *Utilities are service programs that enhance the computer system operations whereas application software refers to software designed to meet the needs of the user.*

**b) Give three examples of utility programs**

- *File viewer*
- *Backup utility*

- *File compression utility*
- *Screen saver*
- *Diagnostic utility*
- *Antivirus utility*
- *Uninstaller*
- *Sorting utility*
- *Disk scanner*
- *Disk defragmenter*
- *Software monitors*
- *Copying utility*
- *Merging utility*
- *Debuggers*
- *Disk partitioners*
- *Disk cleaner*
- *Memory testers*
- *Anti spy utility*
- *Delete utility*
- *Network utility*

## 12) Explain the following as applied to Internet

### Hotspot

- *A location where an internet connection can be accessed wirelessly*
- *A specific location that provides a data link or connection on a wireless network.*

### Internet service provider

- *An ISP is a company that provides Internet connections to individuals and other companies.*

### Search engine

- *A program used to find web contents using keywords or leading statements on the World Wide Web.*

## 13) Give five symptoms of a computer infected by a virus

- *Changes to disk volume identification*
- *Executable files changing size for no obvious reasons.*
- *Programs/files mysteriously disappearing*
- *Access lights turning on for non referenced devices*
- *Less memory available than usual*
- *Unusual error messages occurring more frequently*
- *Disk accesses seeming excessive for simple tasks*
- *Programs taking longer than usual to load*
- *Unfamiliar graphics or quizzical messages appearing on the screen*
- *Failure to do print jobs*
- *Computers may not start at all*
- *Computers may freeze or hang*
- *Pop up of scary /warning messages*
- *Denial of access to some system tools*
- *The computer shut down and restarts without any command from user.*
- *Unexpected anti-virus disabling*
- *Change of keyboard stroke*
- *Corrupting of files*
- *Duplication of files*
- *Creation of file shortcuts*
- *System properties fluctuate*
- *Uncalled for musical or sounds appearing randomly*
- *Booting failure*
- *Deletion of files*
- *Alteration of file names*
- *Screen blackout*

## 14a) Give two reasons to justify ownership of institutional websites

- *To have copyright over the site*
- *To have patent rights over products on the site*
- *To have the right to sell products online*
- *To have a right to post information online*
- *To have a right to advertise goods and services*
- *To have a right to edit and format the content on the site*
- *When the company has online interaction with the public*
- *To welcome criticism or feedback from the public*

- *To encourage pride of ownership*
- *To advertise the business*
- *To sell products online*

**b) What is a web browser?**

- *Software used to navigate content on websites*

**c) Under what circumstances can someone use a uniform resource locator (URL) in web browser?**

- *When a person wants to access a specific resource directly on the internet*
- *Incase a person knows a particular link of a given site or webpage*
- *Incase a person wants to quickly access a particular site/page/resource*
- *Incase a search engine fails to locate the site link*

**15) Give any five advantages of using automation in an industry**

- *Increased productivity*
- *Improved remote access to materials in hazardous areas*
- *Improved monitoring or supervision of industrial activities*
- *Efficient handling of repetitive tasks*
- *Reduced production time making goods available on market in a short time*
- *Reduced accidents*
- *Reduction in cost of production-no need to pay workers*
- *Improved quality of products and range of products*
- *Efficient utilization of raw materials leading to reduction in operational costs*

**16a) Define data communication**

- *Data communication refers to transferring data, instructions and information to another computer or some other devices over a channel.*

**b) State any four requirements for setting up a computer network**

- *Network interface cards*
- *Router*
- *Repeater*
- *Hubs/Switches*
- *Ethernet cables/ Transmission media*
- *Modem*
- *Computers*
- *Wireless access points*
- *Bridges*
- *Network software*
- *RJ45 connectors*
- *Qualified/skilled personnel in networking*
- *Crimping tool/terminator*

**17. For questions a)-e), fill in the missing words from the list below.**

<b>Formula bar</b>	<b>Worksheet</b>	<b>Active cell</b>	<b>Workbook</b>
<b>Cell</b>	<b>Column</b>	<b>Name box</b>	

- The **Cell** is the intersection of a column and a row
- The content of a current cell is also displayed in the **formula bar**
- The **active cell** is one with a thicker boundary and is the insertion point in a spreadsheet
- The cell address of the current cell is displayed in the **name box**

e) A spreadsheet file is referred to as *workbook*

**18a) Give three disadvantages of electronic communication**

- *Associated with unreliable networks*
- *Prolonged use of electronic gadgets leads to health problems like eye strain, backache, neck ache, headache, stress, wrist pain and body fatigue*
- *Associated with quick and widespread computer malware/viruses*
- *Change in technology-obsolescence*
- *Facilitates cyber terrorism and defamation*

**b) Name any two manual communication methods**

- *Ringling a bell or using a bell*
- *Drumming or using a drum*
- *Word of mouth or by a messenger*
- *Using gestures/signs/posture*
- *Postage or ordinary mailing*
- *Whistling or using whistles*
- *Making an alarm or ululation*
- *Use of fire throws/fireworks/smoke*

**19a) Give two situations under which electronic presentations would be used**

- *During teaching*
- *When presenting or addressing a big audience*
- *During advertisements*

**b) State three advantages of using electronic presentations over traditional chalk and talk**

- *An electronic presentation can be save for future reference compared to traditional chalk and talk*
- *Makes the presentation more interesting due to use of multimedia like animations and transitions*
- *Visual explanations/illustrations are more clear*
- *An electronic presentation is more systematic and precise*

**20a) Differentiate between intranet and extranet**

- *An intranet is a network that allows sharing of resources only among members within an organization whereas an extranet is a network that extends resources to authorized members outside the organization related to that organization.*

**b) Define a local area network (LAN)**

- *A LAN is a network that spans a limited/small geographical area like a building or room.*

**c) Suggest an area network which is restricted to connecting users in a city.**

- *Metropolitan area network (MAN)*

Candidate's Name:.....

Signature: .....

Random No.					Personal No.		

*(Do not write your school/Center Name or Number anywhere on this booklet.)*

**S850/1**  
**Subsidiary Information**  
**and Communication**  
**Technology**  
**Paper 1**  
**Nov./Dec.2017**  
2<sup>1</sup>/<sub>2</sub> hours



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper*

For Examiners ' Use Only																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Answer **all** questions in this paper.

1. (a) Name **one** tool used to remove dust from a computer. (01 mark)

.....

(b) Give reasons why one would require the following in the computer laboratory;

(i) Uninterruptible Power Supply. (02 marks)

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

(ii) LCD Projector. (02 marks)

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

2. (a) Write down the procedure for changing the name of an existing file or folder. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(b) Explain the function of a device driver in a computer system. (02 marks)

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

3. Write the following in full as used in Information and Communication

Technology; (05 marks)

- (a) CCTV.....
- (b) ROM.....
- (c) CAD.....
- (d) CPU.....
- (e) VDU.....

4. (a) Identify **one** storage device that is resistant to virus attacks. (01 mark)

.....

(b) Describe the following terms as used in computers;

(i) File. (02 marks)

.....

.....

(ii) Folder. (02 marks)

.....

.....

5. (a) State **four** categories of the components of a computer system.

(04 marks)

(i).....

(ii).....

(iii).....

(iv).....

(b) Give the function of any **one** category you have stated in 5(a).

(01 mark)

.....

.....

6. Indicate TRUE or FALSE against each statement in the table below:  
(05 marks)

	STATEMENT	TRUE/FALSE
(a)	Open source software is copyrighted and distributed without cost for trial period.	
(b)	Product activation is used to ensure that software is not installed illegally.	
(c)	Programming software interfaces user application and computer hardware.	
(d)	A file extension is a combination of characters used to identify a file.	
(e)	A clipboard holds copied data	

7. (a) Define the term **hardware** as used in Information and Communication Technology. (02 marks)

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

(b) Name **two** ports used to connect devices on a computer. (02 marks)

(i).....  
 (ii).....

(c) Give **one** device that can be used to transfer a hard copy document to a computer. (01 mark)

.....

8. (a) What is system software? (01 mark)

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

(b) Outline any **four** functions of an operating system. (04 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

(iv).....

.....

9. (a) Distinguish between **Reading** and **Writing** in relation to storage medium. (02 marks)

.....

.....

.....

.....

(b) Mention one example for each of the types of storage devices given below: (03 marks)

(i) Optical storage.....

(ii) Magnetic storage.....

(iii) Solid state.....

10.(a) Name any **two** examples of documents created using desktop publishing application. (02 marks)

(i).....

(ii).....

(b) State any **three** desktop publishing features that enhance the documents you have named in 10(a). (03 marks)

(i).....

(ii).....

(iii).....

11.(a) Outline any **three** threats a System Administrator may face as a result of networking computers. (03 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

(b) Suggest any **two** measures that the system administrator can employ to reduce the network threats. (02 marks)

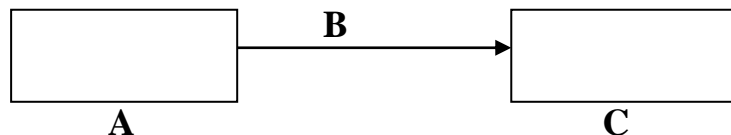
(i).....

.....

(ii).....

.....

12.Study the data communication diagram below and answer the questions that follow:



(a) Name the elements of data communication labelled; (03 marks)

**A.** .....

**B.** .....

**C.** .....

(b) Suggest the devices used to connect **A** to **B**. (01 mark)

.....

(c) State the protocol used to uniquely identify **A** and **C**. (01 mark)

.....

13. The table below consists of some of the peripheral devices of a computer.  
Indicate Input or Output. (05 marks)

	PERIPHERAL DEVICE	INPUT/OUTPUT
(a)	Biometric Reader	
(b)	Projector	
(c)	Plotter	
(d)	Scanner	
(e)	Headphones	

14.(a) Give **two** reasons why an electronic spreadsheet application is suitable for preparing budgets. (02 marks)

(i).....  
.....

(ii).....  
.....

(b) State **one** use of each of the following applications;

(i) Presentation software. (01 mark)

.....  
.....

(ii) Word processor. (01 mark)

.....  
.....

(iii) Communication software. (01 mark)

.....  
.....

15.(a) Name **one** example of a presentation software. (01 mark)

.....

(b) Give the importance of each of the following features as used in electronic presentation;

(i) Master slide. (02 marks)

.....

.....

.....

(ii) Transitions. (02 marks)

.....

.....

.....

16.(a) State **three** advantages of using e-mail services over sending mail by post. (03 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

(b) State **two** advantages of post-mail services over e-mail communication. (02 marks)

(i).....

.....

(ii).....

.....

**17.** Give **five** examples of networking hardware. *(05 marks)*

- (a).....
- (b).....
- (c).....
- (d).....
- (e).....

**18.** Outline **five** ways in which a student can use the internet. *(05 marks)*

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
.....
- (e).....  
.....

**19.**(a) (i) What is data transmission media? *(01 mark)*

- .....
- .....

(ii) Give **two** examples of transmission media. *(02 marks)*

- (i).....
- (ii).....

(b) Name **two** services offered by data communication tools. *(02 marks)*

- (i).....
- (ii).....

20. (a) Give any **two** services that use Electronic payment (E-payment) method.  
(02 marks)

(i) .....

(ii) .....

(b) State **three** advantages of using E-payments over traditional methods.  
(03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

**UGANDA NATIONAL EXAMINATIONS BOARD  
DRAFT MARKING GUIDE 2017  
S850/1 SUB-ICT P.1**

**1. (a) Tools used to remove dust from a computer.**

- Blower
- Sucker
- Wiper / Dry cloth

**Any 1 x 1=1mark**

**(b) Reasons why one would require the following in computer laboratory.**

**(i) Un-interruptible power supply.**

- To give time to the user to save his work by supplying power for a few minutes after power has gone off / is insufficient / unstable
- To safely turn off/shut down the computer.
- To temporarily supply power to enable the user complete work at hand.

**Any 1x2=2 marks**

**(ii) LCD projector.**

- To provide a display/show on wider view to the learners.
- To eliminate the use of chalk which can create dust in the laboratory.
- To minimize the electro-magnetic radiations.

**Any 1x2=2 marks**

**2. (a) The procedure for changing the name of an existing file or folder.**

- Select/right click the file/folder.
- Select rename/properties from the drop list.
- Type the new name and press enter/click on the icon to confirm.

**OR**

- Select the folder/file.
- Press F2 on the keyboard.
- Type the new name and press enter to confirm.

**OR**

- Open the existing file.
- Select 'save as' from the file menu/office button.
- Give the file a new name and press enter to confirm.

**OR**

- Point at the file/ folder name
- Two single clicks
- Give the file a new name and press enter to confirm.

**Any 3x1=3 marks**

**(b) Function of the device driver in a computer system**

- They enable computer components communicate.
- They act as an interface between peripheral devices and the computer.

**Any 1x2=2 marks**

**3. Write the following in full.**

- a) **CCTV:** Closed Circuit Television
- b) **ROM:** Read Only Memory
- c) **CAD:** Computer Aided Design
- d) **CPU:** Central Processing Unit
- e) **VDU:** Visual Display Unit / Video Display Device

**Any 5x1=5 marks**

**4. (a) Storage devices resistant to virus attacks.**

- CD-R
- CD-ROM
- DVD-R
- Blue ray
- DVD-ROM

**Any 1x1=1 mark**

**(b) Describing the following terms as used in computers.**

(i) **File:** A block/collection of related data/information with a name.

**2 marks**

(ii) **Folder:** It is a virtual container for files and sub-folders.

**2 marks**

**5. (a) Categories of the components of a computer system.**

- Hardware.
- Data
- Software.
- User
- Procedure

**Any 4x1=4 marks**

**(b) Function of any one category you have stated in 5 (a).**

➤ **Hardware can be used for:**

- Input of data.
- Output of data.
- Storage of data.
- Processing of data.
- Communication.

➤ **Data:**

It acts as a raw material for information.

➤ **Software:**

- Controls/manages the operations of the resources.
- Provides the user interface.
- Guides computer operations.
- Provides security on data.
- Computer error management.

➤ **User:**

- To instruct the computer system.
- To program the computer system.

**Any 1x1=1 marks**

**6. Indicating TRUE or FALSE**

- (a) FALSE
- (b) TRUE
- (c) FALSE
- (d) FALSE
- (e) TRUE

**Each 1 mark=5 marks**

**7. (a) Definition of hardware.**

Refers to the physical/tangible component of the computer.

**2 marks**

**(b) Ports used to connect devices on a computer.**

- Ethernet port.
- Ps/2 port
- USB port
- Parallel port
- Serial port
- HDMI port
- VGA port
- SD port
- MIDI port
- Fire wire/1394 port
- Audio ports
- SCSI Port

**Any 2x1=2 marks**

**(c) Devices used to transfer a hardcopy document to a computer.**

- Scanner
- Digital camera
- Fax machine (facsimile)
- Smart phone

**Any 1x1=1 mark**

**8. (a) Definition of system software.**

System software is a set of programs designed to manage operations of the computer and avail computer resources to the user

**1 mark**

**(b) Functions of an operating system.**

- Allocating system resources.
- Provides user interface.
- Offers data and software security.
- Scheduling computer jobs/tasks.
- Managing computer memory.
- Monitoring system performance.
- Provides platforms for applications to run.
- Establishing network connections.
- Managing booting processes.
- Device management.

**Any 4x1=4 marks**

**9. (a) Distinguishing reading and writing**

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

*While*

**Writing** is a process of transferring data/information from memory to a storage medium.

*For both sides correct. 2 marks*

**(b) Example for each of the types of storage devices given below.**

- (i) **Optical storage:** CD-R, CD-ROM, CD-RW, DVD-R, DVD-ROM, DVD-RW, Blue Ray
- (ii) **Magnetic Storage:** Hard disk, Floppy disk, Magnetic tape, Zip disk, Jazz disk.
- (iii) **Solid State:** Memory card, Flash disk

*Any 3x1=3 marks*

**10. (a) Examples of documents created using desktop publishing application.**

- |             |                |             |
|-------------|----------------|-------------|
| - Calendar  | - Adverts      | - Magazines |
| - Cards     | - Newsletter   | - Posters   |
| - Invoice   | - Fliers       | - Web pages |
| - Brochures | - Certificates | - Signs     |
| - Label     | - Book covers  | - Menu      |

*Any 2x1=2 marks*

**(b) Desktop publishing features that can enhance the documents.**

- |                     |               |
|---------------------|---------------|
| - Templates.        | - Borders     |
| - Color separation  | - Font color  |
| - Frames            | - Font faces  |
| - Graphical objects | - Font styles |
| - Text boxes        | - Alignment   |

*Any 3x1=3 marks*

**11. (a) Threats that system administrators may face as a result of networking computers.**

- |                                   |              |
|-----------------------------------|--------------|
| - Eavesdropping / lack of privacy | - Spamming   |
| - Data fabrication/modification   | - Plagiarism |
| - Data theft                      | - Taping     |
| - Pharming                        | - Sniffing   |
| - Phishing                        | - Spoofing   |
| - Hacking                         | - Vishing    |
| - Virus attack                    |              |
| - Cracking                        |              |

*Any 3x1=3 marks*

**(b) Measures employed to reduce the network threats.**

- Use passwords.
- User account authentication
- User access control levels
- Use anti spyware
- Use antivirus
- Data encryption
- Use firewalls
- Use biometric authentication.
- Use possessed objects e.g electronic cards

**Any 2x1=2 marks**

**12. (a) Naming elements of data communication.**

- A. Sender/sending device
- B. Communication channel/path or transmission medium
- C. Receiver/receiving device

**Any 3x1=3 marks**

**(b) Device used to connect A to B**

- NIC (Network Interface Card)
- USB card

**1 mark**

**(c) Protocol used to uniquely identify A and C**

Internet protocol

**1 mark**

**13. Indicate INPUT or OUTPUT**

- (A) INPUT
- (B) OUTPUT
- (C) OUTPUT
- (D) INPUT
- (E) OUTPUT

**Each 1 mark=5 marks**

**14. (a) Reasons for using electronic application in budget preparation.**

- The inbuilt mathematical formula and functions provide quick manipulation of data.
- It has automatic recalculation features.
- It has grid lines therefore no need to draw tables.
- The **what if** analysis enables predictions and projections to be made faster.
- It provides a variety of graphical representations of data for better analysis.

**Any 2x1=2 marks**

**(b) Use of the following applications;**

**(i) Presentation software:**

- For creating slides to enhance speech.
- Used for making animated graphics for adverts.
- Creating handouts.

**Any 1x1=1 mark**

**(ii) Word processor:**

- Used to create letters.
- Used to create memos.
- Used to create a document and send it to multiple people.
- Used to create CVs.
- Used to create reports.

**Any 1x1=1 mark**

**(ii) Communication software:**

- It is used to exchange information electronically.
- It is used to create an electronic message.
- It facilitates management of stored E-mails.

**Any 1x1=1 mark**

**15. (a) Example of a presentation software.**

- MS PowerPoint
- Lotus Freelance graphics.
- OpenOffice Impress
- Corel presentation
- K-presenter
- Screencast
- Google slides

**Any 1x1=1 mark**

**(b) Importance of the following features;**

**(i) Master slide:**

- It is used to determine the appearance of all slides in a presentation in terms of format.

**2 marks**

**(ii) Transitions:**

- Determine how slides appear/enter and disappear/exit on screen in a presentation.

**OR**

- Adds animation effects on slides as they appear/enter and disappear/exit on screen during presentation.

**Any 1x2=2 marks**

**16. (a) Advantages of using E-mail services over sending mail by post.**

- Faster delivery of information by E-mail.
- E-mails services are cheaper in term of delivering Information.
- E-mails are more secure since can be protected by passwords.
- E-mails offers immediate feedback to the sender.
- A single E-mail can be sent to multiple recipients at the same cost.
- A single E-mail can be sent to multiple recipients at the same time.
- E-mail is less susceptible/prone to loss.
- E-mail services facilitate management of stored mails.
- E-mail can be sent anywhere at any time as long as there is active network.

**Any 3x1=3 marks**

**(b) Advantages of post-mail services over e-mail communication.**

- There are lower chances of eavesdropping with post-mail service.
- Legal documents with original signatures can be sent using post-mail service.
- Physical messages can be sent by post.
- No loss of mail due to virus attack.
- Documents can be tracked during transit.
- Possibility of checking documents before sending, during transit or the destination for security.
- It is convenient for all categories of people.

**Any 2x1=2 marks**

**17. Examples of networking devices.**

- Network Interface Card (NIC)/Network Adaptor
- Modem
- Hub
- Switch
- Router
- Wireless Access Point (WAP)
- Repeater
- Bridge
- Multiplexer
- De multiplexer
- Concentrator/terminator

**Any 5x1=5 marks**

**18. Ways in which students use internet.**

- Communication through e-mails, voice over IP, on-line chat, telephony
- Online education through virtual classes,
- Online discussion, forums
- Online research through Online library/learning materials like text books
- Access to simulated experiments/behaviors.
- Web-based training/assessment.
- Virtual storage/online storage.
- Online collaboration

**Any 5x1=5 marks**

**19. (a) (i) Definition of data transmission media.**

- It is a path through which data signals are transferred/conveyed from one point to another.

**1 mark**

**(ii) Examples of transmission media.**

- Micro waves
- Radio waves
- Infrared rays
- Gama rays.
- X-rays
- Coaxial cables.
- Twisted pair cables
- Fiber optic cable

**Any 2x1=2 marks**

**(b) Services offered by data communication tools.**

- E-mails
- News groups
- Chat rooms
- Video conferencing.
- Telecommunication/teleconferencing.
- Instant massaging.
- Telemedicine
- E-learning
- E-commerce

**Any 2x1=2 marks**

**20. (a) Services using E-payment method.**

- Banking
- Education
- Health / medical services
- Transport
- Online trade
- Insurance
- Civil service
- Entertainment
- Revenue collection
- Communication
- Utility

**Any 2x1=2 marks**

**(b) Advantages of using E-payment over traditional methods.**

- Quick delivery of money.
- Transaction can be done at any time.
- It is more secure since there is no physical handling of money.
- It is efficient in terms of cost and time.
- Reduced counterfaite

**Any 3x1=3 marks**

**End**

Candidate's Name:

.....

Signature

.....

Random No.					Personal No.		

*(Do not write your school/Center Name or Number anywhere on this booklet.)*

S850/1  
 Subsidiary Information  
 and Communication  
 Technology  
 Paper 1  
 Nov/Dec.2016  
 2<sup>1</sup>/<sub>2</sub> hours



UGANDA NATIONAL EXAMINATIONS BOARD  
**Uganda Advanced Certificate of Education**  
 SUBSIDIARY ICT  
 Paper 1  
 2 hours 30 minutes

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper*

For Examiners ' Use Only																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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**Turn Over**

Answer **all** questions in this paper

1. In modern world, every person is endeavoring to ease access to information. Give **five** reasons why students in Secondary Schools should not be allowed to have mobile phones. (05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
.....
- (e).....  
.....

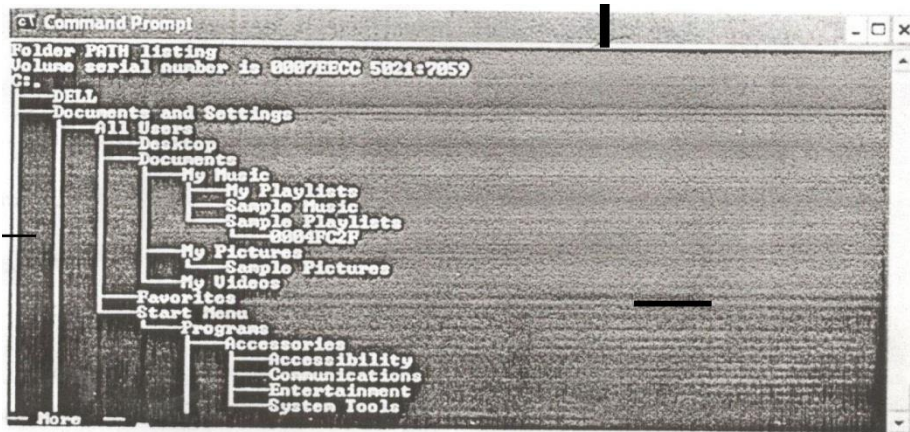
2. (a) Explain the Importance of servicing and maintenance of computers. (02 marks)

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

(b) Suggest any **three** activities involved in servicing and maintenance of computers. (03 marks)

- (i).....  
.....
- (ii).....  
.....
- (iii).....  
.....

3. Use the image below to answer the question that follows.



(a) Write down the path for the subfolder called **My Videos**. (03 marks)

.....

.....

.....

(b) Describe a method you can use to recover an accidentally deleted folder from the desktop. (02 marks)

.....

.....

4. Describe the following terms as used in Information and Communication Technology. (ICT) (05 marks)

(a) System Unit

.....

.....

(b) RAM chip

.....

.....

(c) Power Supply

.....

.....

(d) Bus

.....  
.....

(e) Peripheral devices

.....  
.....

5. (a) Define the term **File extension**. (02 marks)

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

(b) Fill in the right file extension for the following file. (03 marks)

(i) Audio File.....

(ii) Word Document.....

(iii) Presentation document.....

6. (a) What is an output device? (01 mark)

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

(b) Give the **two** categories of printers and an example in each case.

(i) Category.....

Example.....  
(02 marks)

(ii) Category.....

Example.....  
(02 marks)

7. (a) Distinguish between system and application software. (02 marks)

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

(b) Give **three** types of language translators used in programming. (03 marks)

(i).....

(ii).....

(ii).....

8. (a) Differentiate between a computer hardware and computer software. (02 marks)

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

(b) Storage device is **one** of the categories of computer hardware. List the other **three** categories. (03 marks)

(i).....

(ii).....

(iii).....

9. Indicate TRUE or FALSE against each statement in the table below. (05 marks)

	<b>STATEMENTS</b>	<b>TRUE/FALSE</b>
(a)	Public domain software is copyrighted	
(b)	Off-the-shelf software is developed and sold for profit	
(c)	Source codes of open source software programs are only available to paid up subscribers.	
(d)	Shareware programs are widely available from a variety of download sites on the internet	
(e)	Freeware programs are frequently developed by only amateur programmers.	

10. (a) Define the term **Motherboard**. (02 marks)

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

(b) Identify any **three** components housed on the motherboard. (03 marks)

(i).....

(ii).....

(iii).....

11. (a) Define the following terms as used in publications.

(i) Frame. (01 mark)

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

(ii) Template (01 mark)

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

(b) List any **two** desktop publication soft wares (02 marks)

(i).....

(ii).....

(c) Name a document that can be produced using publication software.

(01 mark)

.....

12. Complete the table below.

(05 marks)

	<b>APPLICATION SOFTWARE</b>	<b>PURPOSE</b>
(a)	Word processing	..... .....
(b)	.....	Used to organize data in rows and columns and also perform calculations.
(c)	Database Management systems	..... .....
(d)	Desktop publishing software	..... .....
(e)	.....	Used to combine text, graphics, animation, audio, and video.

13. Computer data and software are exposed to a number of risks hence need for great care and protection. Suggest **five** ways of protecting data and software.

(05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
.....
- (e).....  
.....

14. (a) Give **three** benefits for sending documents using email service. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(b) State **two** benefits for sending documents using ordinary post. (02 marks)

(i).....  
.....

(ii).....  
.....

15. Use the terms below to complete the statements that follow. (05 marks)

Virtual Reality  
Simulation  
Bluetooth

WIFI  
  
Artificial Intelligence

(a) The Science of representing behavior of real life situation using a computerized model is  
.....

(b) The Technology that allows an electronic device to exchange data using Radio waves over a computer network is.....

(c) The technology that allows users to transfer data for a short distance between mobile devices is.....

(d) The technique that rates images by a computer that appear to surround the person looking at them is.....

(e) The Science of computers that enable qualities of human beings to be imitated is.....

16. (a) Distinguish between hyperlink and homepage. (02 marks)

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

(b) Identify **three** netiquette guidelines while using the internet. (03 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

17. (a) Give **two** wireless transmission media. (02 marks)

(i).....

.....

(ii).....

.....

(b) Identify **three** limitations of wireless transmission media. (03 marks)

(i).....

.....

(ii).....

.....

(ii).....

.....

18. Choose the correct terms to complete the statements (a)-(e)

Rename

Watermark

Bookmark

Mail Merge

Merge

Pointer

Cursor

Indent

(05 marks)

(a) A background feature in a document is referred to as

.....

(b) The feature that allows duplication of a document with unique addresses is

.....

(c) The feature that starts a line of text further from the margin is

.....

(d) The feature that assigns a name to a specific point in a document is called.

.....

(e) A symbol on the screen that indicated an insertion point in a document is a

.....

19. Explain each of the following terms as used in Information and Communication Technology. (05 marks)

(a) Communication

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

(b) Network

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

(c) Protocol

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

(d) Modem

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

(e) Bandwidth

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

20. Outline **five** uses of intranets in an organization *(05 marks)*

(a).....  
.....

(b).....  
.....

(c).....  
.....

(d).....  
.....

(e).....  
.....

*END*

**UGANDA NATIONAL EXAMINATION BOARD**

**SUBSIDIARY ICT S850/1**

**UACE 2016 DRAFT MARKING GUIDE**

**1. (a) Reasons why mobile phones should not be allowed in secondary school**

- *Cell phones can be used by students for cheating in exams*
- *Phones can take away learners concentration during classrooms*
- *Can cause insecurity in schools*
- *They are expensive to maintain and service by students*
- *Increase the rate of immoral behavior through pornography*
- *Defamation of fellow students or staff*
- *Increase operational costs of the school e.g power bills*
- *Can lead to digital divide*
- *Hacking/cracking can be done*
- *They can be a source of inappropriate or wrong information*

**2 (a) Explaining the importance of servicing and maintenance of computers**

- *To prolong the life span of hardware and software.*
- *To ensure the proper functioning of the computer.*
- *To update outdated software programs such as antivirus, Operating System, application software.*
- *To increase the efficiency of the computer.*
- *To increase functionality of the computer.*
- *To remove faulty hardware and replace with new ones thus preventing system failure*

**(b) Activities involved in servicing and maintenance of computers.**

- *Repairing and replacing damaged parts.*
- *Upgrading software.*
- *Installing power guards/surge protectors.*
- *Scanning devices before use*
- *Disk cleaning*
- *Emptying recycle bin*
- *Firewall activation*
- *Disk defragmentation*
- *Upgrading software*
- *Blowing dust off*

- *Installing software and*

### **3 (a) The stating of the file path**

*Z:\Documents and Settings\All users\Documents\My Videos*

### **(b). Description of method of recovering an accidentally deleted folder from the desktop**

- *On the keyboard press Ctrl + Z*
- *Open the recycle bin>Right click on the deleted folder> select Restore*
- *Run the recovery utility > select deleted folder>select destination>click restore*
- *Right click on any space on desktop>shortcut menu appears> click undo delete*
- *Open the recycle bin, then cut and paste on desktop*
- *Open the recycle bin and drag the file to the desktop*

### **4. Description of ICT terms**

**(a) System unit:** *Is an enclosure that contains most of the computer components  
Is a casing or box that houses the internal electronic components.*

**(b) Ram chip:** *A primary data storage device which allows data to be accessed at a high speed  
in any order.*

*A working memory of a computer which stores data temporarily.*

**(c) Power supply:** *A device that supplies the required amount of power to all components of a  
computer.*

*It is a computer hardware that converts AC to DC for computer use*

**(d) Bus:** *A communication system/highway/shared flow/path through which  
data/information/instructions travels to and from different parts of a computer.*

**(e) Peripheral devices:** *Electronic equipment or devices connected from outside the computer  
and even if removed the computer continues to work.*

*Components that are attached or removed to increase computer efficiency.*

### **5 (a) Definition of file extension**

*This is a suffix or group of letters occurring after the period in the file name indicating the  
purpose/ type/ format of the file contents Or*

*Refers to the last three/four/five characters after a period(.) that make up the entire file name.*

### **(b) Files extensions for the following**

**(i) Audio file** *.MP3, .WMA, .WAV, .FLS, .MP4A, .AUX, .AIF, .AUD, .CDA, AU.*

**(ii) Word documents .Doc, .Docx**

**6 (a) Definition of an output device**

*A hardware component that allows a user to display/convey/show the progress of result processing or information.*

**(b) Categories of printers with examples**

*(i) Impact printers*

*Examples Dot matrix, Daisy wheel, drum, braille*

**(ii) Non-impact printers**

*Examples Laser jet printer, Deskjet printer, inkjet printer, thermal printer, bubble jet printer*

**7 (a) Distinction between system software and application software**

*System software refers to the programs/instructions designed to manage the operation of computers and avail computer resources to the users while*

*Application software is a program designed to enable a user to accomplish specific task(s).*

**(b) Types of language processors**

- *Interpreters*
- *Compilers*
- *Assemblers*

**8 (a) Differentiate between computer hardware and computer software**

*Computer hardware is any physical part of a computer that can be touched and seen  
While*

*Computer software is the set of computer programs that provide instructions to computer hardware.*

**(b) Listing three categories of computer hardware apart from storage**

- *Input devices*
- *Output devices*
- *Processing devices*
- *Communication devices*

9. (a) Public domain software is copyrighted – *FALSE*

Off-the-shelf software is developed and sold for profit – **TRUE**

Source codes of open source software programs are only available to paid up subscribers – *FALSE*

Shareware programs are widely available from a variety of downloaded sites on the internet – *TRUE*

Freeware programs are frequently developed by only amateur programmers – *FALSE*

**10 (a) Definition of a motherboard:**

*A piece of silicon or semiconducting material onto which integrated circuits or other electric components are embedded/printed/fixed.*

*A circuit board found inside the system unit that holds a number of electronic components attached to the computer.*

**(b) Identification of components housed on the motherboard.**

- *Microprocessor*
- *BIOS chip*
- *Display adapters*
- *Built in VGA*
- *NIC*
- *AGP and PCI expansion slots*
- *Buses*
- *CMOS battery*
- *Heat sink*
- *Transistors*
- *Ports.*

**11(a) Definition of terms as used in publications**

**(i) Frame:** *A feature that enables a user to fit in the required text or image of the required dimension.*

**(ii) Template:** *A computer document containing basic information that is used as a model for writing other documents such as business letters, envelopes, etc.*

*This is a tool having a pre-formatted design styles that can be used in publication to help a user easily create basic publication.*

**(b) Listing desktop publication software**

- *Adobe illustrator*
- *Microsoft Office Publisher (Ms Publisher)*
- *Adobe PageMaker*
- *Print Master*
- *PrintShop Professional*
- *Siera Print Artist*
- *Coral Draw*
- *Adobe InDesign*
- *Serif page plus*

**(c) Naming a document that can be produced using publication software**

- *Brochure*
- *Cards*
- *Certificates*
- *Calendars*
- *Posters*
- *Flyers*
- *Banners*
- *Webpage*
- *Newsletter*

**12. Completing the table**

Word processing      *Used to create, edit, format, save and print documents*

*Spreadsheet*      *Used to organize data in rows and columns and also perform calculations*

Database Management System      *Used to organize data in a way that allows to access, retrieve and make use of that data. Develop and manage database.*

*Desktop publishing software*      *Used to design/create publications*

### 13. Ways of protecting data and software

- *Make backup copies of data regularly*
- *Minimise the number of visitors in the computer laboratory*
- *Destroy all the print materials that may not be required*
- *Install and regularly update antivirus software*
- *Scan external storage sources with updated antivirus software*
- *Use power backup/stabiliser to avoid system crash*
- *Activate firewall to restrict unauthorised access to computer resources especially on computer networks.*
- *Use online storage or cyber storage or cloud storage*
- *Data masking*
- *Sensitising the public about safety data measures*
- *Burglar proofing of the computer rooms*
- *Use passwords on computer logins*
- *Encrypt data*
- *Use level authentication for sensitive data*
- *Hide files/folders*
- *Electronically erase data*

### 14(a).

- *Unlikely to be lost*
- *Faster to arrive*
- *Allows sending messages to several people at a time*
- *Cheaper in terms of costs involved*
- *Messages can be sent at any time anywhere*
- *Allows sending multimedia format documents*
- *Less prone to illegal access*

- *Several documents can be sent at once*

(b)

- *It is good /convenient for sending physical items*
- *Good for sending legally binding documents*
- *Convenient for sending bulky/large documents*
- *It is a cheaper method of sending documents*
- *It offers a safer delivery of sent documents*
- *Documents can be tracked while in transit*
- *There is a possibility of checking the documents before sending during transit or at the destination for security purposes*
- *It is a convenient for all categories of people*
- *It provide employment opportunities to people involved*
- *It offers infrastructure development in terms of paying taxes*

15

(a) *Simulation*

(b) *WIFI*

(c) *Bluetooth*

(d) *Virtual reality*

(e) *Artificial intelligence*

16. (a) **A hyper link** is a built in connection to another related page or part of a webpage which can be a text or image while

**A home page** is the starting/index/first page of a website which can act as a list/table of contents or an index page to the website

**16 (b) Netiquette guidelines while using internet**

- *Keep message brief and use proper grammar and spellings*
- *Be careful when using sarcasm and humor*
- *Never read someone's private mail*
- *Minimize use of uppercase in text when sending messages*
- *Post only acceptable information that has no harm to the public*
- *Avoid impersonation*
- *Adhere to the same standards of behavior online that you follow in real life*

- *Know where you are in cyber space*
- *Respect other people's time and bandwidth*
- *Make yourself look good online*
- *Help keep flame wars under control*
- *Respect other people's privacy*
- *Don't abuse your power*
- *Be forgiving of other people's mistakes*
- *Logout or log off your account after use*
- *Forward e-mail messages you receive only with permission of the sender.*
- *Remember you are not anonymous. What you write in an e-mail and web site can be traced back to you.*
- *Obey copyright laws. Don't use others' images, content, etc. without permission.*
- *Use distribution lists appropriately and with permission.*
- *Do not send SPAM i.e. posting or e-mailing unsolicited e-mail, often advertising messages, to a wide audience*

#### **17 (a) Examples of wireless transmission media**

- *IRDA (infrared data Association)*
- *Microwave*
- *Broadcast Radio or radio waves*
- *Bluetooth*

#### **Disadvantages of wireless transmission media**

- *Some are not designed for high speed data transfer*
- *They have a limited range of communication (distance)*
- *Some devices do not have profiles compatible with devices you want to connect with*
- *Susceptible to interference and dilution*
- *More prone to hackers*
- *Initial costs of setting up and maintenance are high*
- *Requires expertise or skilled personnel to configure/administer*

18

- Watermark*
- Mail merge*

c) *Indent*

d) *Bookmark*

e) *Cursor*

19 a) **Communication** is the exchange of information between devices. It also refers to the process of sending and receiving information through a communication channel/path

b) A **network** is an interconnection of computers and network devices to enable communication and resource sharing

c) A **protocol** is a set rules/standards/regulations governing/guiding communication over a network

d) A **modem** is a device that translates analog signals to digital signals and from digital to analog. A combined device for modulation and demodulation

(e) A **bandwidth** is the amount of data that can be transmitted at a time

- *It also refers to the rate of data transmission*
- *It refers to the range of frequencies in a given transmission medium*
- *It is a maximum throughput of a transmission medium*

## 20. Benefits of an intranet to an organization

- *Facilitates internal emails*
- *Provides access to company contacts information, procedure manual and other frequently updated documents*
- *Used for posting and updating employee forms*
- *Posting internal job listings*
- *Provides electronic catalogs for ordering supplies*
- *Facilitates collaborative computing*
- *Scheduling meeting and appointments*
- *Posting financial statements and other types of corporate information*
- *Maintains shared calendars, projects timelines and other project documents*
- *Provides access to company databases and other systems*
- *For monitoring internal security*

Candidate's Name: .....

Signature .....

Random No.					Personal No.		

*(Do not write your school/Center Name or Number anywhere on this booklet.)*

S850/1  
 Subsidiary Information  
 and Communication  
 Technology  
 Paper 1  
 Nov/Dec.2015  
 2<sup>1</sup>/<sub>2</sub> hours



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
**2 hours 30 Minutes**

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper.*

<b>For Examiners ' Use Only</b>																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

Answer **all** the questions in this paper

1. (a) Distinguish between **Random Access Memory(RAM** and **Secondary storage**. (04 marks)

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

(b) Give an example of secondary storage (01 mark)

.....

2. Explain each one of the following database features

a) Field Name (02 marks)

.....  
.....

b) Field properties (01 marks)

.....  
.....

c) Data type (02 marks)

.....  
.....

3. (a) Differentiate between Computer servicing and computer repair (02 marks)

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

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

i) Woolen carpet (01 mark)

.....  
.....

ii) Blower (01 mark)

.....  
.....

iii) CCTV cameras. (01 mark)

.....  
.....

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

i) To trace files he cannot locate. (01 mark)

.....  
.....

ii) To trace a word from an open document. (01 mark)

.....  
.....

b) A student is typing a document using Microsoft word. Write down three steps the student will use to shut down the computer. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

5. State five activities that can be performed on a computer when using a mouse. (05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
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- (e).....  
.....

6. Identify five ICT related employment opportunities in Uganda today (05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
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- (d).....  
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- (e).....  
.....

7. (a) What is multiprocessing? (01 mark)

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

b) Give two advantages of each of the following Operating systems

i) Windows. (02 marks)

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

ii) Linux (02 marks)

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

8. (a) Name two examples of an application software. (02 marks)

(i).....

(ii).....

b) State three problems associated with usage of packaged software (03 marks)

(a).....  
.....

(b).....  
.....

(c).....  
.....

9. (a) What is the World Wide Web? (02 marks)

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

b) Show three ways in which the internet can facilitate trade and business. (03 marks)

(a).....  
.....

(b).....  
.....

(c).....  
.....

10. Show one way in which the Internet can be a danger to

a) Morality. (01 mark)

.....  
.....

b) Labour. (01 mark)

.....  
.....

c) System security. (01 mark)

.....  
.....

d) Human Security. (01 mark)

.....  
.....

e) Information. (01 mark)

.....  
.....

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

a) Diligence. (02 marks)

.....  
.....

b) Versatility. (02 marks)

.....  
.....

c) Accuracy. (01 marks)

.....  
.....

12.(a) Describe the term computer Literacy. (02 marks)

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

b) Outline any three ways in which ICT can improve the quality of Education. (03 marks)

(a).....

.....

(b).....

.....

(c).....

.....

13. (a) State the difference between copy a file and move a file. (02 marks)

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

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

F:\accounts\bursar\fees.xls

i) Identify the file name (01 marks)

.....

ii) On what drive is the file located? (01 mark)

.....

iii) In which subfolder is the file located? (01 mark)

.....

14. (a) List any three input devices. (03 marks)

(a).....

(b).....

(c).....

b) Give a function of any two input devices listed in (a) above (02 marks)

(a).....

.....

(b).....

.....

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

a) (i) Domain name (01 mark)

.....

(ii) User name. (01 mark)

.....

iii). Top level domain name (01 mark)

.....

b) (i) In which type of organization does the domain name of the email, user above, subscribe to. (01 mark)

.....

ii) Give any other example other than the one type you have stated in b(i) above. (01 mark)

.....

16. (a) Define the term Computer Network. (02 marks)

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

b) Give three disadvantages of networking computers. (03 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

17. (a) Differentiate between a server and a client computer. (02 marks)

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

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

i) Bridge (01 mark)

.....  
.....

ii) Switch (01 mark)

.....  
.....

iii) Router (01 mark)

.....  
.....

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
1	ID Number	Name	Item 1	Item 2	29.1
2	100000	Akello	990	34	11.8
3	100000	Nambi	660	58	#DIV/O!
4	#####	Busingye	8800	-	
5				#NAME?	
6					

a) (i) Suggest a reason why the entry in cell A4 appeared as shown. (01 mark)

.....  
 .....

(ii) How do you rectify the error in cell A4? (01 mark)

.....  
 .....

(iii) What does the error in cell E4 mean? (01 mark)

.....  
 .....

(iv) How do you correct the error in cell D5? (01 mark)

.....  
 .....

19.(a) Tick the three utility programs from the list below. (03 marks)

	Tick(√)
Web browser	
Data compressor	
Disk defragmenter	
Operating system	
Antivirus software	

b) State the function of any two utility programs you ticked in (a) above. (02 marks)

- i).....  
.....
- ii).....  
.....

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

(i) Simplex. (02 marks)

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

Example

.....

ii) Half Duplex. (02 marks)

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

Example

.....

b) Identify one non-physical data transmission media. (01 mark)

	Tick here
Optic fiber	
Bluetooth	
Twisted pair	

**END**

### 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**

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

	<b>TICK HERE</b>
<b>Optic fibre</b>	
<b>Bluetooth</b>	✓
<b>Twisted pair</b>	

**END**

Candidate's Name:  
 .....

Random No.					Personal No.		

Signature .....

*(Do not write your school/Center Name or Number anywhere on this booklet.)*

S850/1  
 Subsidiary Information  
 and Communication  
 Technology  
 Paper 1  
 Nov/Dec.2014  
 2<sup>1</sup>/<sub>2</sub> hours



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
**2 hours 30 Minutes**

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper.*

For Examiners ' Use Only																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	

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**Turn Over**

*Answer **all** the questions in this paper*

1. (a) Explain the term Information and Communication Technology. (02 marks)

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

b) State **three** ways in which information technology has improved communication. (03 marks)

(i).....

.....

(ii).....

.....

(iii).....

.....

2. Give one reason why a school director would purchase the following equipment for a computer laboratory.

(a) Blower. (01 mark)

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

(b) Anti-glare filter screens. (02 marks)

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

(c) Air conditioner. (02 marks)

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

3. During a practical examination students were required to open a blank file and save its as

D:\STUDENT WORK\EOT PRACTICAL\safety.doc.

(a) State the name of the immediate subfolder in which students must save the file. (01 mark)

.....

b) Write the root directory onto which the file must be saved. (02 marks)

.....






c) Suggest one example of a computer application the student can use to create the file. (01 mark)

.....

d) State the name of the file represented by the above file path. (01 mark)

.....

4. Study the devices and answer questions that follow.

<p><b>A</b></p> 	<p><b>B</b></p> 	<p><b>C</b></p> 
<p><b>D</b></p> 	<p><b>E</b></p> 	

(a) Name the devices labeled. (03 marks)

A.....

B.....

C.....

(b) Give one major similarity between devices A and E. (01 mark)

.....  
 .....

(c) Identify one device which can be categorized as an output device. (01 mark)

.....

5. Read the statement below and write the words TRUE or FALSE in the spaces provided. (05 marks)

STATEMENT	TRUE/FALSE
(a) Machine code is one of the level computer languages.	
(b) Microsoft is the only operating system in use in Uganda	
(c) WINZIP is an example of system software which reduces the actual size of a file	
(d) A student delivering a presentation would need an LCD projector and laptop.	
(e) Screen savers can be categorized as desktop publishing software since they can be used for advertising purposes.	

6. (a) State any two adverse effects of using internet for the business and communication. (02 marks)

(i).....  
 .....

(ii).....  
 .....

b) Suggest the most appropriate Internet Communication services in the following situations.

(i) Outline meetings between two company employees in geographically separated regions. (01 mark)

.....

(ii) Instant and real time communication between friends. (01 mark)

.....

(iii) Typed views on an on-going online discussion amongst a specific group of people. (01 mark)

.....

7. Identify any three devices other than computers require to set up a network within a school environment. (03 marks)

(a).....

(b).....

(c).....

b) Distinguish between data communication and networking. (02 marks)

.....

.....

.....

.....

8. (a) List any three possible threats to data in a computer networked environment. (03 marks)

(i).....

(ii).....

(iii).....

b) Name any two types of security measures which can be used to control the threats listed in (a) above. (02 marks)

(i).....

.....

(ii).....

.....

9. Given below is the notice which the head girl has typed and intends to pin on all the notice boards in the school.

**THE REGIONAL SWIMMING GALA  
ON 22<sup>ND</sup> NOVEMBER 2014  
AT MAKERERE UNIVERSITY POOL  
FEE: 500  
REGISTER WITH HEADGIRL**

Explain any five word processing features which the head girl would use to enhance the appearance of the above notice.

(05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
.....
- (e).....  
.....

10. (a) Suggest one way in which computers have been made user friendly for persons that are physically challenged in the following areas.

(i) Without hands. (01 mark)

.....  
.....

(ii) Impaired vision. (01 mark)

.....  
.....



12. (a) State any three operations of the machine cycle of a Central Processing Unit. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(b) Describe any one of the operations stated in (a) above. (02 marks)

.....  
.....

13. (a) A set of instructions that are arranged in a logical way to run a computer is called. (01 marks)

.....

(b) List any three categories of system software. (03 marks)

(a).....

(b).....

(c).....

(c) Give one example of presentation software. (01 mark)

.....

14. (a) Give three benefits of connecting computer to the internet. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(b) Outline two disadvantages of connecting computers to the internet. (02 marks)

.....  
.....

15. Explain why an organization would prefer to use Electronic Mail (E-mail) over ordinary mail. (05 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(iv).....  
.....

(v).....  
.....

16. Outline five areas of self-employment that a sub ICT can engage in. (05 marks)

(i).....

(ii).....

(iii).....

(iv).....

(v).....

17. Use the terms below to complete the sentences that follow in (a)-(e) (05 marks)

- Slide animation
- Slides
- Animation effect
- Slide layout
- Slide design
- Slide show
- Slide master
- Handouts

- (a) The visual presentation from one slide to another slide.....
- (b) The .....set up the way text/ objects appear on a slide during a presentation.
- (c) The presentation of slide in a sequence on a projection screen is referred to a .....
- (d) The .....defines the arrangement of all items that make up a slide.
- (e) A user can print the entire presentation on one page by printing the.....

18. (a) State one difference between a Compact Disc(CD) and Digital Versatile Disc(DVD). *(01 marks)*

.....

.....

.....

.....

.....

(b) Explain the circumstances under which the following storage devices are used

(i) Memory card. *(02 marks)*

.....

.....

(ii) Flash disk. *(02 marks)*

.....

.....

19. (a) Describe the following terms in programming languages.

(i) Interpreters. (01 mark)

.....  
.....

(ii) Syntax. (01 mark)

.....  
.....

(iii) Debugging. (01 mark)

.....  
.....

(b) Identify two characteristics of a good programming language. (02 marks)

.....  
.....

20. Using the email address:**annet@gmail.com**, identify what these parts stand for.

(a)annet. (01 mark)

.....

(b) @ . (01 mark)

.....

(c)gmail (01 mark)

.....

(d) .com (02 marks)

.....  
.....

END

1a) Explain the term information and communication technology.

***Information and communication technology is the combination of telecommunication and computer technologies to enhance communication.***

b) State three ways in which information technology has improved communication.

***People in remote places use mobile phones to access telephone services.***

***ICT facilitates group discussions***

***People can communicate through e-mails***

***ICT facilitates chatting through chat rooms***

***Websites***

***Storage***

***Cheap***

***Teleconferencing***

***Video conferencing***

***Instant messaging***

***News groups***

***ICT enables people to send and receive fax messages***

2) Give one reason why a school director would purchase the following equipment for a computer laboratory.

a) Blower

**To facilitate cleaning of computing equipment by removing dust from the equipment.**

b) Anti-glare filter screens

**To regulate excess light from monitors especially CRT monitors so as to reduce eye strain.**

c) Air conditioner

**To regulate temperatures and monitor air distribution in the computer laboratory.**

3) During a practical examination, students were required to open a blank file and save it as **D:\STUDENT WORK\EOT PRACTICAL\safety.doc**

a) State the name of the immediate subfolder in which students must save the file.

**EOT PRACTICAL**

b) Write the root directory onto which the file must be saved.

**D:\ or D:**

c) Suggest one example of a computer application the student can use to create the file.

**Word processing software like Microsoft word**

d) State the name of the file represented by the above file path.

**safety.doc or safety**

4) Study the devices below and answer questions that follow.



a) Name the devices labeled:

- A                      **Digital camera or camera**
- B                      **Bar code reader**
- C                      **Scanner or flatbed scanner**

b) Give one major similarity between devices A and E.

**Both are input devices**  
**Both are used to feed data into a computer for processing**

c) Identify one device which can be categorized as an output device.

**Device D (speakers)**

5) Read the statements below and write the words TRUE or FALSE in the spaces provided.

	STATEMENT	TRUE/FALSE
a)	Machine code is one of the low level computer languages	<b>TRUE</b>
b)	Microsoft is the only operating system in use in Uganda	<b>FALSE</b>
c)	WINZIP is an example of a system software which reduces the actual size of a file	<b>TRUE</b>
d)	A student delivering a presentation would need an LCD projector and a laptop	<b>TRUE</b>
e)	Screen savers can be categorized as desktop publishing software since they can be used for advertising purposes	<b>FALSE</b>

6a) State any two adverse effects of using internet for business and communication

**Identity theft**  
**Hacking**  
**Cracking**  
**Internet based fraud**  
**Sabotage**  
**Cyber terrorism**  
**Masqueraders**  
**Phishing**

**Pharming**  
**Illegal tapping**  
**Piracy**  
**Eavesdropping**  
**Plagiarism**  
**Loss man hours**  
**Altering**  
**Virus infections**

b) Suggest the most appropriate internet communication service in the following situations:

i) Online meetings between two company employees in geographically separated regions.

**Video conferencing**

**Teleconferencing**

**Instant messaging**

ii) Instant and real time communication between friends.

**Internet relay chats or chat rooms**

**Instant messaging**

iii) Typed views on an on-going online discussion amongst a specific group of people.

**Discussion groups or discussion forum or discussion fora**

7a) Identify any three devices other than computers required to set up a network within a school environment.

**Network interface cards**  
**Router**  
**Repeater**

**Hubs**  
**Switches**  
**Ethernet cables**

**Wireless access points**  
**Bridges**  
**Transmission media**

b) Distinguish between data communication and networking.

**Data communication refers to one computer transferring data, information and instructions to another computer or other computers on a communications channel whereas networking is the linking or connecting of two or more computers to share resources.**

8a) List any three possible threats to data in a computer networked environment.

**Unauthorized access or cracking or hacking**  
**Computer virus infection**  
**Information theft**  
**Data encryption**  
**Change of file names**  
**Adding a password**  
**Data deletion**  
**Plagiarism**  
**Pharming**  
**Change of file location or hiding of files**

b) Name any two types of security measures which can be used to control the threats listed in (a) above.

**Strong passwords and usernames**

**Activating firewalls**

**Use of biometric devices**

**Data encryption**

**Prosecuting suspected culprits**

**Sensitize users about data safety measures**

9) Given below is a notice which a head girl has typed and intends to pin up on all the notice boards in the school.

<p>THE REGIONAL SWIMMING GALA ON 22<sup>nd</sup> NOVEMBER 2014 FEE: 5000 REGISTER WITH HEADGIRL</p>
---

Explain any five word processing features which the head girl would use to enhance the appearance of the above notice.

**Bolding to make the text more obvious**

**Font size**

**Alignment**

**Font type**

**Underline**

**Background colour**

**Line spacing**

**Italics**

**Text highlighter**

**Clip art**

10a) Suggest one way in which computers have been made user-friendly for persons that are physically challenged in the following areas:

i) Without hands

**Voice recognition devices for data input**

**Use of biometric devices instead of typing passwords**

**Use of sensors**

ii) Impaired vision

**Use of sensors**

**Braille keyboards or data written in braille**

**Use of projectors**

**Audio enabled keyboards**

**Voice recognition devices for data input**

**Use of biometric devices instead of typing passwords**

b) Give three health issues that may be caused by the prolonged use of computers.

**Eye defects**

**Repetitive strain injury**

**Techno stress**

**Body pain**

**Headaches**

**Neck pain**

**Back pain**

**Fatigue**

**Germs from the keyboard**

11) Choose the appropriate file extensions from the list given for sentences (a) to (e).

.doc                    .txt                    .tif                    .bat                    .sys

a) Program files that perform fundamental operations in a computer.

**.sys**

b) A Microsoft word file.

**.doc**

c) A file containing series of commands during boot up.

**.bat**

d) A plain file created using note pad.

**.txt**

e) A graphical file created using applications such as Adobe Photoshop.

**.tif**

12a) State any three operations of the machines cycle of a central processing unit.

**Fetching  
Decoding**

**Execution  
Storing**

b) Describe any one of the operations stated in (a) above.

**Fetching-obtaining a program instruction from memory**

**Decoding-translating instructions into commands a computer can handle**

**Execution-undertaking processing tasks**

**Storing –transferring results of processing into memory from CPU**

13a) A set of instructions that are arranged in a logical way to run a computer is called:

**Computer software or system software or a program**

b) List any three categories of system software.

**Operating system  
Programming languages**

**Utilities/service programs/system utilities**

c) Give one example of presentation software.

**Microsoft PowerPoint  
Open office presentation**

**Kingsoft presenter  
Google slides**

**Lotus freelance**

14a) Give three benefits of connecting computers to the internet

**E-mails**  
**Backup or online storage**  
**E-commerce**  
**File download or upload**  
**Discussion groups**  
**Weather forecast information**  
**E-learning**  
**Access to news**  
**Online booking and reservations**

**Instant messaging**  
**E-governance**  
**E-publications**  
**Online games**  
**Software update**  
**Social networking**  
**Telecommuting**  
**Collaborative research**

b) Outline two disadvantages of connecting computers to the internet

**Information theft**  
**Computer viruses**  
**Hacking**  
**Cracking**

**Additional costs**  
**Exposure to pornography**  
**Deprives one of privacy**

15) Explain why an organization would prefer to use electronic mail (E-mail) over ordinary mail.

**One can send any size of messages just at the cost of a local call.**

**They can be sent at any time and the results are almost simultaneous because the messages reach their destinations after a short time.**

**Electronic mails are highly efficient.**

**They save a lot of time for example you can present a report at a conference by going to it and downloading it from the conference.**

**Saves time, paper, and money compared to the telephone or written letters**

**The recipient may read the message anytime**

**Allows you to communicate easily with many people at once**

**Allows you to thoughtfully compose what you would like to say**

**Ability to send to multiple recipients at the same time.**

**It is very easy to send a reply to an e-mail as soon as it is received by using a reply button.**

**Large files such as spreadsheets and graphics can be sent as attachments**

**Can be used for advertisements**

**Assurance of whether the mail has been delivered is given**

**No use of stamps**

**Convenient when retrieving and delivering**

16) Outline five areas of self-employment that a sub ICT student can engage in.

**Offering software support**  
**Print publications/create/ Advert designer**  
**Photocopying and typesetting**  
**Writing CDs**  
**Music mixing**  
**Internet café management**

**Video editing**  
**Computer secretarial bureau**  
**Computer vendor or dealer**  
**Digital money transfer dealing**  
**Teaching ICT**  
**Computer servicing and repair**

17) Use the terms below to complete the sentences that follow in (a)-(e)

- Slide transition
- Slides
- Animation effect
- Slide layout
- Slide design
- Slide show
- Slide master
- Handouts

- a) The visual movement from one slide to another slide is **slide transition**.
- b) The **animation effects** setup the way text/objects appear on a slide during a presentation.
- c) The presentation of slides in a sequence on a projection screen is referred to as **slide show**.
- d) The **slide layout** defines the arrangement of all items that make up a slide.
- e) A user can print the entire presentation on one page by printing the **handouts**.

18a) State one difference between a compact disc (CD) and a digital versatile disc (DVD)

**DVDs have higher storage capacity than CDs**

**DVDs are cheaper per unit data storage**

**DVDS guarantee higher quality features (sound and video)**

**CDs are cheaper (cost) than DVDs**

**Reading and writing CDs is faster than on DVDs**

b) Explain the circumstances under which the following storage devices are used.

i) Memory card

**When data has to be read from small electronic devices like phones, PDAs and palmtops**

**When there is a likelihood of making changes to files**

**When there is need to access files on various electronic devices**

**When there is need to transfer files from one device to another**

**When you have a memory card reader**

ii) Flash disk

**When there is need to access files on various electronic devices with USB ports**

**When files have to be kept for a long time (quickly and easily backup files)**

**When more files have to be added from time to time**

**When there is need create a boot disk**

19a) Describe the following terms in programming languages

i) Interpreters

**Interpreters are programs that read one of the source language instructions line by line and change it into machine language when the program is running.**

ii) Syntax

**The grammar of a programming language**

iii) Debugging

**Detection and removal of syntax and logical errors in a program.**

b) Identify two characteristics of a good programming language.

**Suitability to the problem**

**Availability**

**Clarity and simplicity**

**Consistency**

**Efficiency**

**User friendliness**

20) Using the e-mail address: annet@gmail.com, identify what these parts stand for:

a) annet

**User name**

**User**

**User ID**

**Unique ID**

b) @

**Symbol that separates the e-mail user name from the rest of the address**

c) gmail

**Domain name**

**The service provider**

**Server name**

d) .com

**Organization name (where the e-mail account is held)**

**Top level domain (type of domain where the e-mail account is held)**

END

Candidate's Name: .....

Random No.					Personal No.		

Signature .....

*(Do not write your school/Center Name or Number anywhere on this booklet.)*

S850/1  
 Subsidiary Information  
 and Communication  
 Technology  
 Paper 1  
 Nov/Dec.2013  
 2<sup>1</sup>/<sub>2</sub> hours



**UGANDA NATIONAL EXAMINATIONS BOARD**  
**Uganda Advanced Certificate of Education**  
**SUBSIDIARY ICT**  
**Paper 1**  
**2 hours 30 Minutes**

**INSTRUCTIONS TO CANDIDATES:**

*Answer **all** questions in this paper*

*This paper is made up of **twenty** equally weighted questions*

*All answers should be written in blue or black ink in the spaces provided in the question paper.*

For Examiners ' Use Only																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

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**Turn Over**

*Answer **all** the questions in this paper.*

1. The table below shows specifications of two computers X and Y.

<b>Computer Specifications</b>	<b>Computer X</b>	<b>Computer Y</b>
Processor	Intel (R)3.2 GHz	Intel(R) 3308 MHz
RAM	1GB	2000MB
Hard disk	4600MB	50GB
Monitor size	19"	15"

(a) Which of the two computers would you recommend for a company to buy? (01 mark)

.....

(b) State two reasons to defend your answer in(a) (02 marks)

(i).....

.....

(ii).....

.....

(c) Which is the least important of the computer specifications given in the table? (01 mark)

.....

.....

(d) State one reason defending your answer in (c) (01 marks)

.....

.....

2. (a) Explain how computers can be professionally be used by  
 (i) Teachers (02 marks)

.....

.....

(ii) Doctors (02 marks)

.....

.....

(b) State one health risk associated with continued usage of computers. (01 marks)

.....

3. (a) Explain the following terms in spreadsheet.

(i) Values. (02 marks)

.....  
.....

(ii) Labels. (02 marks)

.....  
.....

(b) Name a symbol used when writing functions in a spreadsheet. (01 mark)

.....

4. (a) A student had a file on her laptop and wanted to transfer it to a computer in a laboratory. Give three devices that she can use to transfer the file.

(03 marks)

(a).....

(b).....

(c).....

(b) Explain the following methods of transferring a file from one location to another

(i) Drag. (01 mark)

.....  
.....

(ii) Copy (01 mark)

.....  
.....

5. (a) Give three factors a company should consider before buying any storage devices. (03 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(b) Teo's network access speed is six megabytes per second. How many kilobytes does Teo's network receive or send per second? (02 marks)

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

6. (a) Give one use for each of the following computer devices.

(i) Power supply unit. (01 mark)

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

(ii) System case. (01 mark)

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

(iii) CMOS battery. (01 mark)

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

(b) Explain the following

(i) Analog device. (01 mark)

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

(ii) Digital device. (01 mark)

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

7. (a) State three types of computer software. (02 marks)

(i).....

(ii).....

(iii).....

(b) Differentiate between a software version and release. (02marks)

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

8. (a) State two internet based tool that support web based research. (02 marks)

(i).....

(ii).....

(b) Identify three things one would require in order to get connected to the internet. (03 marks)

(a).....

(b).....

(c).....

9. Outline five factors which determine data transmission speed over the internet. (05 marks)

- (i).....
- (ii).....
- (iii).....
- (iv).....
- (v).....

10. (a) Give five factors an organization should consider before choosing a Local Area Network (LAN) model. (05 marks)

- (a).....  
.....
- (b).....  
.....
- (c).....  
.....
- (d).....  
.....
- (e).....  
.....

11.(a) Write the initial procedure for booting a computer system. (03 marks)

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

(b) Give any two measures taken to ensure that computers in a laboratory are safe. (02 marks)

(i).....  
.....

(ii).....  
.....

12. (a) A computer file is made up of a file name and file extension.

(i) What is the purpose of a file extension. (02 marks)

.....  
.....

(ii) Write the file extension for word processor document. (01 mark)

.....

(b) Okello deleted his file accidentally in which he can recover his file? (02 marks)

.....  
.....

13. (a) An internet café plans to replace a Cathode Ray Tube(CRT) monitors with Liquid Crystal Display(LCD) monitors. Why should the café replace CRTs with LCDs? (05 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(iv).....  
.....

(v).....  
.....

14. Indicate True or False against each statement in the table below. (05 marks)

	<b>Statement</b>	<b>True/False</b>
(a)	Windows XP is graphical user interface operating system	
(b)	Presentation software supports multimedia	
(c)	Word processors have formula bars.	
(d)	Backup is to combine the content of two or more files to produce one output file.	
(e)	The Disk Operating system is menu driven	

15. Company A uses custom-made applications while company B uses off-shelf applications.

Write down any five advantages Company B has over Company A. (05 marks)

(i).....  
 .....

(ii).....  
 .....

(ii).....  
 .....

(iii).....  
 .....

(iv).....  
 .....

(v).....  
 .....

16. (a) Explain the term Software Piracy. (02 marks)

.....  
 .....

(b) Write down any three application programs that can be obtained from open source software. (03 marks)

(i).....

(ii).....

(iii).....

17. The table below shows part of a database. Use it to answer the questions that follow.

EMPLOYEE NO.	NAME	TEL .NO	SALARY	NO. OF MONTHS	TOTAL PAY
E227008	Betty	0774267820	\$700,000	3	
E227011	Kintu	0701998142	\$400,000	4	

(a) Write down the data types in the following fields

(i) TEL No (01 mark)

.....

(ii) SALARY (01 mark)

.....

(b) Suggest a suitable primary key. (01 mark)

.....

(c) The formula entered in the design view to determine TOTAL PAY, which is a product of SALARY and NO. OF MONTHS is. (02 marks)

.....

.....

18. State any five characteristics of modern computer. (05 marks)

(i).....  
.....

(ii).....  
.....

(iii).....  
.....

(iv).....  
.....

(v).....  
.....

19. From the given terminologies used for internet and network below, choose the correct one to complete each of the statements that follow.

- A discussion group
- Instant messaging
- Video conferencing
- A chat room
- Online shopping
- Telephony

(a) The type of internet communication that allows multiple users to exchange messages in real time is called.....(01 mark)

(b) The type of internet communication that enables individuals to post messages on a particular topic for others to read and respond to is called (02 marks)  
.....

(c) The use of multimedia technologies in communication is called (02 marks)  
.....

20.(a) Explain the following terms as used in electronic mail.

(i) Blind Carbon Copy (BBC). (02 marks)

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

(ii) Carbon Copy (CC). (02 marks)

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

(b) State one requirement needed for one to send an email. (01 mark)

.....  
.....

**END**

The table below shows specifications of two computers X and Y.

Computer specifications	Computer X	Computer Y
Processor	Intel ® 3.2 Ghz	Intel ® 3308Mhz
RAM	1GB	2000MB
Hard disk	4600MB	50GB
Monitor size	19"	15"

a) Which of the two computers would you recommend for a company to buy?

*Computer X*

b) State two reasons to defend your answer;

*Higher processor speed 3.2 GHz*

*More random access memory 1GB*

c) Which is the least important of the computer specifications given in the table?

*Monitor size*

d) State one reason defending your answer above.

*Does not affect the output of work*

*Does not affect performance of the computer*

2a) Explain how computers can professionally be used by:

i) Teachers

*Collaboration tool and exchange of ideas*

*Tool for teaching and learning*

*Assess and grade learners*

*Store learners' notes and marks*

ii) Doctors

*Monitoring patients*

*Medical consultation*

*Telemedicine*

*Therapy*

*Simulations*

*Medical research*

*Carrying out operations on body parts*

*Scanning for diseases*

*Prescriptions of drugs*

b) State one health risk associated with continued usage of computers.

*Germ from the keyboard*

*Eye defects*

*Repetitive strain injury*

*Techno stress*

*Body pains*

*Headaches*

*Fatigue*

*Wrist pains*

3a) Explain the following terms in a spreadsheet

i) Values

*Data that can be manipulated or calculated*

**ii) Labels**

*Text based entry that identifies data*  
*Words on column headings*

*Non mathematical data*

**b) Name a symbol used when writing functions in a spreadsheet.**

*Equal sign (=) or @ sign or plus sign (+)*

**4a) Give three devices that can be used to transfer files from one computer to another**

*Flask disk*

*Zip disks*

*External hard disk*

*Floppy diskettes*

*Compact disk*

*Memory cards*

*Digital versatile disk*

*Magnetic tapes*

*Blue ray disk*

b) Explain the following methods of transferring a file from one location to another.

**i) Drag**

*Method of moving a file or folder from one location on the screen to another by use of a mouse*

**ii) Copy**

*Method of creating a duplicate of a file or folder*

**5a) Give three factors a company should consider before buying any storage devices.**

*Storage capacity*

*Cost*

*Safety of media/nature of work to be stored*

*Compatibility of the media with system-IDE, SATA or USB*

*Brand/make/durability*

*Data access speed*

**b) How many kilobytes are in six megabytes per second?**

*1MB=1024KB 6MB=1024X6*

*6144kilobytes*

**6a) Give one use for each of the following computer devices**

**i) Power supply unit**

*Some have a fuse to protect the system*

*Convert AC from mains to DC used by the system*

*Receive and distribute power to different system parts in required voltages*

*Alternate power to regional voltage settings (110 or 240V)*

*Provide protection to user against electrical signals*

**ii) System case**

*Provide earthing for the system*

*Facilitate movement of the system as a unit*

*House the computer processing hardware*

*Protect internal components against dust, dirt and falling objects*

*Provide attachments for holding different units together*

**iii) CMOS battery**

*Powers up the CMOS chip which stores configuration information about the computer.*

**b) Explain the following**

**i) Analog device**

*Can measure, record, and reproduce continuous data/information*

*Receive data and information inform of changing phenomena*

**ii) Digital device**

*Receive and understand data and information in binary digits-0s and 1s*

*Generate, store, process data using discrete values-numbers and digits'*

**7a) State three types of computer software**

*Computer aided design (cad) software*

*Multimedia software*

*Project management software*

*Personal information managers (PIM)*

*Presentation software*

*Graphics processing software*

*Desktop publishing software*

*Database software*

*Spread sheet software*

*Word processing software*

*Paint/image editing software*

*Video and audio editing software*

*Web page authoring software*

*Communication software*

*Education software*

*Personal finance software*

*Reference software*

*Entertainment software*

**b) Differentiate between a software version and a release.**

*A software version is a major upgrade in a software product leading to even change in the software interface and some procedures whereas a software release is the public or private distribution of a new or upgraded version of a software product.*

**8a) State two internet based tools that support web based research.**

*Search engines like Google*

*Web browsers*

*Hyperlinks*

*Online libraries/books like Google books*

*Online encyclopedia like Wikipedia, Encarta*

*Gopher*

**b) Identify three things one would require in order to get connected to the internet.**

*Any communication hardware like modems, routers, switch, hub*

*Communication software for browsing*

*Internet service provider for connection*

*Physical/wireless connection media*

*Network operating system*

*Phone/computer*

**9) Outline five factors which determine data transmission speeds over the internet.**

*Nature of material one is trying to access or send-graphics tend to load slowly*

*Bandwidth*

*Modem/routing device speed and positioning*

*Network data traffic at a time*

*Data transmission media*

*Environmental factors/natural conditions-rainy, cloud, stormy weather and thunder usually affect transmissions negatively*  
*Malfunction of computers-hardware problems-poor network card, video card or signal receiver*  
*Computer processor speed*  
*Malware, spyware and viruses-software problems-cookies*  
*Memory available*  
*Computer internet setting*

**10) Give five factors an organization should consider before choosing a local area network (LAN) model.**

*Size of organization: a point to point is ideal for about ten users at a time*  
*Networking budget: where server based networks demand much more money*  
*Needs of the network itself: administrator servers*  
*Level of data security needed: server based network models are more secure*  
*Amount of traffic expected*  
*Nature of business*  
*Level of administrative support*  
*Future needs of the organization-scalability*

**11a) Write the initial procedure of booting a computer system.**

*Switch on the mains*  
*Switch on the UPS or stabilizer*  
*Switch on the system unit*  
*And finally switch on the monitor*

**OR**

*Switch on the mains*  
*Switch on the UPS or stabilizer*  
*Switch on the system unit and finally switch on the monitor*  
*Power on self test is conducted by the BIOS*  
*Bootstrap loads the OS into RAM*  
*The desktop is activated*

**b) Give any two measures taken to ensure that computers in a laboratory are safe.**

*The computers should be properly switched on or off*  
*Avoid illegal connections and disconnections*  
*Avoid exposing computers to heat/direct sunlight*  
*Keep away with bags*  
*Foods and drinks should not be allowed in the computer laboratory*  
*Keep the computers in a dust free environment*  
*The repairs should be done by technical persons*  
*The computers should be connected to the UPS or stabilizer*  
*Keep fire extinguishers to guard against fires*  
*Computers should be allowed to cool down before covering them*  
*Lock the laboratory after use of computers*  
*Use burglar proofing*  
*Install and update antivirus*  
*Have usernames and passwords to access the computers*  
*Setup lightening arrestors to guard against thunder*  
*Use firm tables to hold the weight of hardware*

**12a) A computer file is made up of a file name and a file extension.**

**i) What is the purpose of a file extension?**

*To identify the file type*

*Helps to organize files*

*Files can easily be located*

*Determine which program to open the file*

**ii) Write down the file extension for a word processed document.**

*.doc*

*.docx*

**b) In which two ways can an accidentally deleted file be recovered?**

*Restoring from the recycle bin*

*Use of the undo command*

*Use of recovery software*

*Drag from the recycle bin*

**13) Why would there be a need to replace CRTs with LCDs?**

*Portable*

*Releases less radiations*

*Consumes less power*

*Occupies less space*

*Can easily be mounted onto the wall*

*Has inbuilt antiglare screens*

**14. Indicate True or False against each statement in the table below.**

		<b>True/false</b>
a)	<b>Windows Xp is a graphical user interface operating system</b>	<i>TRUE</i>
b)	<b>Presentation software supports multimedia</b>	<i>TRUE</i>
c)	<b>Word processors have formula bars</b>	<i>FALSE</i>
d)	<b>Backup is to combine the content of two or more files to produce one output file</b>	<i>FALSE</i>
e)	<b>The disk operating system is menu driven</b>	<i>FALSE</i>

**15) Write down any five advantages of using off-shelf applications.**

*Cheaper to buy*

*Easily available from many vendors*

*Thoroughly tested to eliminate bugs*

*Lots of user support-books, user guides, online help, discussion forums*

*Easy to learn and use (user friendly)*

*Can be customized*

*Easy to restore*

*Easy to share files*

*Used to perform several functions*

**16a) Explain the term software piracy.**

*Unauthorized duplication and use of computer software*

**b) Write down any three precautions taken to prevent software piracy.**

*Use of a code key/ serial*

*Sensitizing users on illegal use of software*

*Use of holograms-a component which comes with original copies and cannot be duplicated*

*Require software authentication and activation*

*Incorporate flexible licensing*

*Prosecute software pirates*

**17) The table below shows part of a database. Use it to answer the questions that follow.**

EMP NO	NAME	TEL NO	SALARY	NO OF MONTHS	TOTAL PAY
E227008	Betty	0774267820	\$700,000	3	
E227011	Kintu	0701998142	\$400,000	4	

**a) Write down the data types entered in the following fields.**

i) TEL NO                      *Text*

ii) SALARY                      *Currency*

**b) Suggest a suitable primary key.**

*Employee No.*

**c) The formula entered in the design view to determine TOTAL PAY, which is a product of SALARY and NO OF MONTHS is?**

*=[salary]\*[No. of month] in the form*

*[salary]\*[No. of month] in the query*

**18) State any five characteristics of a modern computer.**

*Speed*

*Accuracy*

*Versatile*

*Diligence*

*Storage*

*Automation*

*Artificial intelligence*

*Communicative*

**19) From the given terminologies used for internet and networks below, choose the correct one to complete each of the statements that follow.**

**A discussion group**

**Instant messaging**

**Video conferencing**

**A chat room**

**Online shopping**

**Telephony**

**a) The type of internet communication that allows multiple users to exchange messages in real time is called:**

*Chat room*

**b) The type of internet communication that enables individuals to post messages on a particular topic for others to read and respond to is:**

*Discussion group*

**c) The use of multimedia technologies in communication is called:**

*Videoconferencing*

**20a) Explain the following terms as used in electronic mail**

**i) Blind carbon copy (BCC)**

*Used to hide an e-mail address so that none of the recipients can see whom you have sent the message*

**ii) Carbon copy (CC)**

*Used when sending a copy to more than one address without hiding*

**b) State one requirement needed for one to send an e-mail.**

*Internet connection/network*

*Electronic mail account/address on any email provider sites and most of them are free for platinum users for example Gmail*