

**S850/1**  
**SUBCIDIARY ICT**  
**JULY/AUG 2018**  
**2½hrs**

**EMIRATES COLLEGE SCHOOL**  
**SENIOR SIX PRE-MOCK EXAMINATIONS 2018**  
**Uganda Advanced Certificate of Education**

**SUBCIDIARY ICT**

**Paper 1**

**2 ½hours**

**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

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

1. (a) Difference between **data** and **information**.

Data refers to raw facts that have less meaning to the user.e.g a,b,c,d while Information refers to processed data.e.g a typed sentence with the correct grammar.

(b) Describe the information processing cycle

**Input:**

This stage involves collection of data from external sources to be entered into the computer system.

**Processing:** this stage involve performing operations on the data to be transformed into a meaningful form (information).

**Output:** this stage involves presenting the results or information in a readable form like print out to the user.

Storage: this stage involve saving information or output for future use in case of need.

**Communication;** this involve the transfer of data from external sources using a key board to the memory then to the processor and later to the display unit or the printer after being processed.

2. A computer system is a group of interconnected parts of the working together to complete a given task, as an ICT student enlight senior one students how you can bring together various parts of the computer to accomplish a given task given that they are all disconnected.  
(5 marks)

Connect a keyboard, mouse and a signal cable from the monitor to the System unit.  
Then connect the power cable of monitor to the power source and then that of the System unit.  
Then you can go ahead to boot the computer.

3. (a) Explain the following processes of the machine cycle. (3 marks)

**Fetching:** Is a process of obtaining/retrieving an instruction from memory.

**Decoding:** is a process of translating the retrieved instruction into machine code a language a computer can understand.

**Storing:** Is a process of writing or sending the results to memory.

b) Differentiate between word wrap and text editors. (2 marks)

Is the automatic movement of the cursor to the next line at the end of each line in a document while **text editors** are programs that are used for editing plain text files some times provided with the operating system.e.g Not pad,Vim,Edit plus,PHP, Edit pad Lite.

4. Mangen downloaded a file and it seemed to be big to fit in the available space on the hard disk and when he requested for assistance from the teacher, he was told to compress that file, which he didn't know, briefly guide him on how to do it.  
(5 Marks)

Right click, a dialog box appears then choose add archive.  
Give it time until a zipped file will be created on the desk top.

5. The teacher forgot to take through form four computer students the printing process for a handout of 5 slides. As the class coordinator you were requested by Mr. Obbo a physics teacher to brief the rest of the class before starting the exam.  
Briefly explain how this can be done. (5 Marks)

Go to file select print, a dialog box appears, Select the printer to be used, the pages and the number of copies to be printed then click ok to print.

6. Briefly explain the use of the following hardware components of the computer. (5 Marks)
- (i) Male connectors
  - (ii) Expansion slots
  - (iii) Jumpers
  - (iv) System clock
  - (v) Serial port

**Male connector:**

This establishes a connection of peripheral devices like the monitor to the system unit when attached to the female port.

**Expansion slots:**

**This enables a computer user to add new devices such as sound card in order to increase the functionality /capability of the computer.**

**Jumpers:** They provide set up configuration information to the motherboard and other hardware components.

**System clock;**

. It determines the rate at which computer operations take place within the system.

**Serial port:**

**It establishes a connection of peripheral devices that transmit one bit of data at a time to the system unit.** Serial ports usually connect devices that do not require fast data transmission rates, such as a mouse, keyboard, or modem

7. As the head of department ICT the procurement officer wanted to inquire from you about the factors that affect display devices before buying monitors for the school. List down any five that you know.  
(5marks)

**Pixels;** these are tiny dots of phosphor material that glow when electrically charged to produce an image.

**Resolution,** which describes the sharpness and clearness of image created on the screen determined by the number of pixels a monitor can display.

**Dot pitch,** a measure of image clarity, in terms of distance between each pixel on a display. The smaller the distance between pixels (dot pitch), the sharper the image.

**Refresh rate** is the speed that a monitor redraws images on the screen.

Type of the monitor i.e CRT or LCD

Brand of the monitor. Branded computers are reliable.

8. The table below shows two computers A and B

Computer specifications	Computer A	Computer B
Brand	Dell	Celeron
Ram size	1028MB	1.95GB
Storage capacity	4.49GB	4500MB
Monitor size	14	17
Computer speed	Anthron 3.30MHz	Duo core 3.31GHz
Price	600,000Ugx	700,000Ugx

(a) The school was financially strained and the head teacher called to guide him on which computer sample specifications can be based on to buy computers for ICT department in your school. Of the two which computer would you recommend basing on the above details?

(1mark)

8. (a) Computer B

(b) Give two reasons to defend your answer

(2marks)

- ✓ Higher processor speed
- ✓ Higher amount of RAM

(c) What is the most important computer specification one should base his final decision of which computer to buy?

(1mark)

- Processor speed.

9. (a) State three examples of customized software that you think can be relevant in our society and specify where each can be applied. (3 marks)

- Report making software in schools
- School financial management program used in the office of the bursar to manage fees payment.
- Hot potato used for self assessment in multiple choice questions.

(b) Identify any two advantages associated with the use of off self software compared to customized software (2 marks)

- Off-shelf programs have a relatively cheap in terms of cost and maintenance compared to customized.
- They are appropriate for a wide range of applications.
- They are usually provided together with a documentation explaining how to use them.
- They are easy to use and suitable for non-specialists.
- It provides online help unlike customized
- Readily available from software vendors
- Multipurpose compared to customized which perform specific tasks.
- It is well documented with a user guide.

10. (a) Distinguish between command line interface and graphical user interface giving relevant examples. (2 Marks)

- GUI guides the user on how to use it while CLI requires cramming of commands
- It can support multiple tasks at a time while CLI support single task at a time.
- It uses the mouse to select the desired command while CLI uses the keyboard to issue out commands.

(b) Basing on your knowledge of computers and their components mention three factors you would consider to select an operating system (3 Marks)

- ✓ Basic Design of the computer,
- ✓ Applications intended to be used by the computer
- ✓ User friendliness,
- ✓ Cost,
- ✓ Availability in the market,
- ✓ Reliability
- ✓ Hardware configuration requirement

11. (a) List three characteristics of good computer software (3 Marks)

- ✓ Accessible
- ✓ Fair in terms of cost and maintenance
- ✓ User guide
- ✓ Flexible
- ✓ Easy to install
- ✓ Occupy small space on the hard disk
- ✓ Not easily affected by the virus e.g Linux
- ✓ Free from bugs.
- ✓ Up gradable
- ✓ Well documented.

(b) Mention any two factors you would consider before obtaining software.(2 Marks)

- ✓ Cost
- ✓ Accessible
- ✓ User friendly
- ✓ User guide
- ✓ Easy to load
- ✓ Compatibility with other software

12. A company has decided to introduce an intranet and remove Internet access for its staff.  
 (a) Describe two reasons why the company will not allow its staff internet access.

(2 Marks)

- Face booking at the expense of doing their work.
- Slowing it down due to many users accessing at the same time.
- Cost implication according to the package.
- Efficient in terms initial cost and regular mantainance.
- Effective internal communication
- Reduce on easy spread of viruses
- Reduce on possibility of hackers getting access to the system.

(b) Apart from removing internet access, give three advantages to the company of using an intranet.

(3 Marks)

- Communication is made cheaper
- It facilitates sharing of software among different users.
- It reduces cost for computer hardware requirements as terminals are cheaper compared to PCs.

13. Describe three advantages and two disadvantages to the general public of using the Internet to do online shopping. (5 marks)

**Advantages of online shopping**

- Saves the business man from risks such as accidents that may arise out of movements.
- Saves the user from theft due to holding large sums of money.
- It avails the buyer with a variety of goods.
- It is convenient since it operates 24/7
- It avails quality goods to consumers from delivery goods.
- It saves the consumer from being over charged since it eliminates the middlemen

**Disadvantages of online shopping**

- Exposes user credit card details to hackers.
- Possibility of purchasing poor quality goods
- Limits possibility of bargaining as prices are fixed hence exploiting the buyer.
- Some times goods may delay to be delivered to the owner.
- Requires internet which may not reliable in some areas.
- It requires elementary knowledge about use of computers and internet which is not common to every one.

14. (a) Give two factor you should consider while choosing an ISP (2 Marks)

- Compatibility of their software with your system
- Speed of the modem/internet.

- Offer of spam blocking feature.
- Cost for different packages.
- Customer service support.
- Restriction on business use.

(b) Advantages for the use of internet to a business.

- On line shopping
- Facilitates communication
- On line advertising
- On line customer inquiry
- Electronic money transfer

15. a) Define the term transmission media

**Data transmission media** refers to materials or techniques used to carry data signals from one machine to another. (2 marks)

b) Giving live example in our day today life explain the following terms

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

(2 marks)

(i) **Simplex transmission** is a mode of transmission where data flows in only one direction between the two communicating devices. Example broadcast on radio, TV and transmission between keyboard and the monitor, fire alarms.

(ii) **Half Duplex**; is a mode of data transmission where data signals can flow in both directions but not at the same time. Example Walkie-talkie communication well known as radio calls.

(iii) **Full Duplex**; is a mode data transmission where data signals can flow in both directions at the same time. Example Telephone communication.

16 (a) You have been appointed a network administrator of your School, 54 students were given home to find out the use of some network devices.

Briefly explain to them the following terms below; (5 Marks)

(i) **Modem**: converts data from Digital to analog at sending computer and from analog to digital at the receiving computer.

(ii) **Router**; is a device that used to route the packets on the Internet. It reads the address on the packets and decides in which direction the packet has to take to reach the final destination. It controls data traffic on the network. It forwards data packets to their final destination.

(iii) **Gateway**; is a combination of hardware and software that connects networks that use different protocols.

(iv) **Hub**; is a device that provides a central point for cable connection in a network.

(v) **Repeaters**; is a device that amplifies data signal and retransmits it further to the final destination.

Boosts data signals to their final destination.

17. (a) What is cloud computing?

**Cloud computing**

The practice of storing regularly used computer data on remote servers that can be accessed via the internet for easy update and retrieval.

(2 marks)

(b) Of what relevance is this new trend “cloud computing” to you as an ICT student.

(3 Marks)

- It provides free storage space.
- It avails information where you are provided you have internet.
- It safeguards your data from getting lost due to disk crash.
- It provides a backup storage.
- Reduces cost in terms of hardware requirements for storage.

18. (a) Out are the positive implication for the use of ICTs in the following areas in our

Society

(2 Marks)

(i) **Space exploration**

To research for possibility of human survival and other living organisms on other planets.

(ii) **Transport**

To control traffic in major towns.

Online booking

Control computer enhanced s shuttles or rockets.

(b ) Briefly explain how green computing can be practiced in our society.

(3 Marks)

- Use the hibernate or sleep mode when away from a computer for extended periods
- Use flat-screen or [LCD monitors](#), instead of cathode ray tube (CRT) monitors
- Buy energy efficient notebook computers, instead of desktop computers
- Activate the power management features for controlling energy consumption
- Make proper arrangements for safe electronic waste disposal
- Turn off computers at the end of each day
- Refill printer cartridges, rather than buying new ones.
- Instead of purchasing a new computer, try repairing existing device.
- Dispose of e-waste according to federal, state and local regulations.
- Employ alternative energy sources for computing [workstations](#), servers, [networks](#) and [data centers](#).e.g use of invertors and solar systems.
- Power-up and power-down energy-intensive peripherals such as [laser printers](#) according to need.
- implementation of energy-efficient central processing units ([CPUs](#)), [servers](#) and [peripherals](#)
- Use of solar energy directly converted from light into electrical energy this reduces on exploitation of natural resources less consumption and related forms of pollution.

19. Explain how the following can be used in presentation software



(i)**Slide sorter**; is a view that enables you to view all your slides in a presentation and organize them as desired.

(ii)**Slide master**; It helps you to make uniform features in form of background or objects to every slide in your presentation.

(iii) **Handout**; it enables one to print multiple slides on a single page.

(iv)**Slide show**; enables you to view your slides in a presentation.

(v)**Action Burton**; used on slides to help you navigate through the presentation.

(5 marks)

20. (a) What is electronic publishing? (1 Marks)

(b) Distinguish between electronic publication and traditional publications. (2 Marks)

(b) List two applications which are used to design electronic publications. (2 Marks)

(a)**Electronic publishing**; refers to availing information to the public in digital format.

(1 mark)

(b) **Electronic publication** refers to information availed to the public in digital format e.g. on line news papers while **Traditional publication** refers to information availed to the public as printed material on physical media like paper or piece of cloth.(printed news papers sold on streets).

(2 marks)

(c)Applications for designing Electronic publications.

- ✓ Adobe illustrator
- ✓ Ms publisher
- ✓ Adobe photo shop
- ✓ Adobe page maker
- ✓ Ventura