

Name: Centre/Index No:

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S850/1
Subsidiary Information
and Communication
Technology
Paper 1
July/August, 2019
2½ hours

MARKING GUIDE

LANGO SECONDARY SCHOOLS MOCK EXAMINATION ASSOCIATION
Uganda Advanced Certificate of Education

SUBSIDIARY ICT

Paper 1

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

*Attempt **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.*

No additional materials (answer sheets) are provided.

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOT

1. (a) What is a **device driver**? (01 mark)

A device driver is a program that controls a particular type of device that is attached to a computer by converting the more general input/output instructions of the operating system to messages that the device type can understand.

Are program files that enable one of more hardware devices to communicate with the computer's operating system.

Any 1x1 = 1mark.

(b) State **two** peripheral devices that may require installation of a device driver. (02 marks)

- Printers - Keyboard - Monitor - MODEM

- Scanners - Mouse - Digital camera

- Web camera. - Card reader etc. *Any 2x1 = 2marks.*

(c) Outline **two** examples of windows operating system. (02 marks)

- Windows XP, Windows Vista, Windows 7, Windows 8, Windows 10.

Any 2x1 = 2marks.

2. A problem with some computers in the computer lab was reported to a lab technician. Two of the technician's recommendations were for the school to install gadgets to regulate temperatures, and also buy a woolen carpet for the computer laboratory.

(a) Suggest the gadget that they can buy in order to regulate room temperature. (01 mark)

- Air conditioner / Fans.

- Dehumidifiers. *Any 1x1=1mark.*

(b) Give **two** reasons to explain why the gadget suggested in 2(a) above is required in a computer room. (02 marks)

i. To regulate temperature in the computers room.

ii. To absorb moisture.

iii. To control dust in the lab.

(c) State **two** benefits of a woollen carpet in a computer laboratory. (02 marks)

- i. Control dust.
- ii. Absorbs moisture that prevents the buildup of static electricity.
- iii. Acts as insulator to broken/live electric cables.

3. State five activities that can be performed on a computer using a mouse. (05 marks)

- Pointing. -Highlighting.
- Clicking. -Selecting an item.
- Dragging/ Dropping. -Scrolling a bar. *Any 5x1 = 5marks*

4. a) Give the function of the following keyboard keys. (05 marks)

Caps Lock key

- Changes letter casings from Lower to Upper and vice versa.

Shift key

- Used with other keys to type the symbol shown in the upper part of that key.

Tab key

- This key moves the cursor several spaces forward.

Ctrl key

- Used to produce control characters.

Alt key

- Used to produce control commands.

5. State whether the following are **TRUE** or **FALSE**. (05 marks)

	Statement	TRUE/FALSE
1.	A slot is found on the motherboard of a computer	TRUE
2.	Winrar is a utility software	TRUE
3.	POST helps to check if hardware is properly functioning and	TRUE

	connected	
4.	System clock speed records the current data and time speed on the monitor	FALSE
5.	Primary key in a database table causes data redundancy	FALSE

6. (a) There are various forms of data communication which includes the both guided and unguided transmission.

(i) What is a guided transmission? (01 mark)

- Is a process of transmitting signals through a physical medium / restricted path. i.e. through cables.

(ii) Give any two examples of unguided transmission. (02 marks)

i. Radio transmission

ii. Microwave transmission

iii. Satellite transmission

iv. Bluetooth transmission

v. Wi-Fi transmission

Any 2x1 = 2marks.

(b) Distinguish between modulation and demodulation as applied to data transmission.

(01 mark)

- Modulation is a process of converting analog signals into digital form while Demodulation is a process of converting digital signals back to analog form.

(c) Identify the device that can carry out both activities in (b) above. (01 mark)

- MODEM

7. (a) Distinguish between **mail merge** and **word wrap** word processing concepts. (02 marks)

Mail merge is a word processing feature that allows users to combine two files (documents) into a single one while word wrap is a word processing feature that automatically move text to the next line.

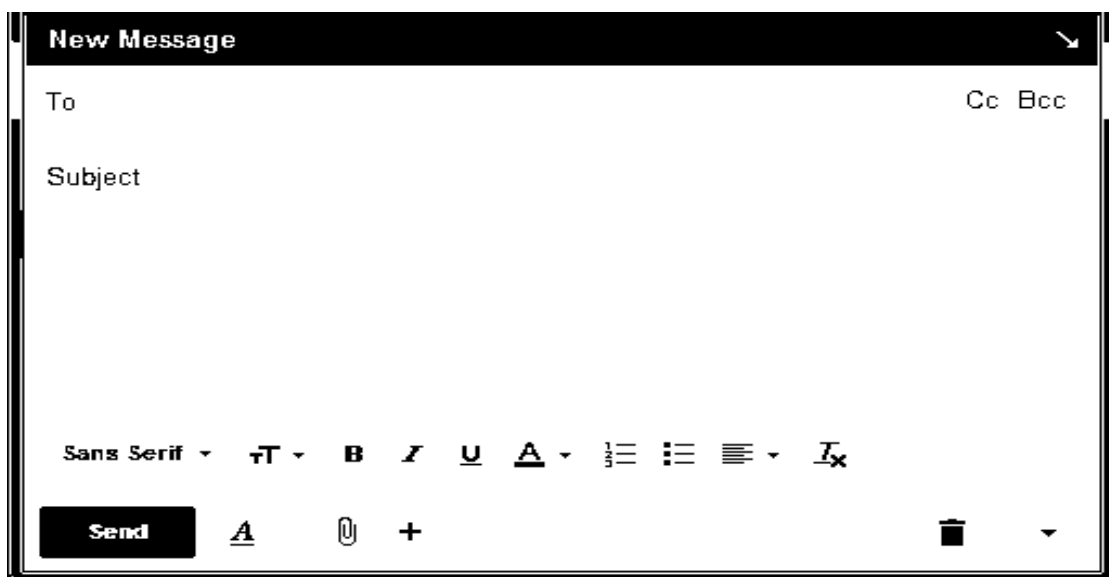
(b) State any **three** advantages of using electronic word processors. (03marks)

- i). It enables editing without retyping.
- ii). Word processors allows users to make many copies of the same document.
- iii). Word processors allow user to manipulate text through copying & pasting.
- iv). It enables mass production of documents i.e. mail-merging.
- v). Provides faster proof reading capabilities.
- vi). Enables autocorrect features for error corrections.


8. (a) What is **an e-mail**? (02marks)

- Is a digital / electronic message exchanged from an author/ sender to one or more recipients across the internet.

(b) Below is a capture of an email window. Study it carefully and answer the questions that follow.



State the purpose of the following (03marks)

- i. **To:** is where the address of the recipient is typed.
- ii. **Subject:** refers to the theme/topic of the e-mail.
- iii.  allow users to add file/files to be sent with the message

9. (a) Distinguish between **synchronous** and **asynchronous** data communication modes (02marks)

Synchronous mode of communication is where characters are sent as blocks of signals **while** asynchronous communication mode is where each group of digital or analog signals make up the code for one character is separated and individually and sent one at a time across communicating devices.

(b) State **one** area in each case, where the following data transmission modes can be used. (03 marks)

Mode of transmission	Area of application
Full duplex	Cell phone calls, Land-line calls.
Half duplex	Security radio calls (WALKI TOKI).
Simplex	Radio and Television broadcast.

10. (a) Define the term computer servicing (01 mark)

Computer servicing is a process of diagnosing, installing, configuring and maintaining computer systems and networks.

(b) Give any two items/materials that can be used to service computers in a computer laboratory. (02 marks)

- Antistatic wrist strap. - Wire cutters. - Cable ties. - Mild soap.
- Screwdriver. - Lint free cloth. - Compressed air. - Dust Blower.
- Digital multimeter. - Antivirus - Scandisk or Chkdsk. etc.

Any 2x1=2marks.

(c) Explain any two importance of servicing computers. (02 marks)

- i. To prolong the life of hardware.
 - ii. To pre-empt problems that may hinder the proper performance of the computer systems.
 - iii. To update outdated software programs.
 - iv. To repair PC components.
 - v. To schedule backups.
 - vi. To create restore points OS.
- Any 2x1 = 2marks.*

11. Mr. Odil, a computer illiterate teacher was informed of the new ICT equipment and among these were the biometric devices which he had no idea about. He later seeks your help. As an ICT student,

(a) What are **biometric** devices? (01 mark)

- Is a security identification and authentication device that uses physiological or behavioral characteristics like finger prints, facial images, iris and voice recognition.

(b) Mention any **three** biometric devices that they might have informed him about. (03 marks)

- i. Iris recognition equipment.
 - ii. Finger print scanners.
 - iii. Voice recognition equipment.
 - iv. Face recognition equipment.
 - v. DNA or Blood test by blood bank etc.
- Any 3x1 = 3marks.*

(c) Explain any one disadvantage of using biometric devices (01 mark)

- The systems are not 100% accurate.
- Require integration or additional hardware.
- Cannot be reset once compromised.
- Environment and usage can affect measurements.

12. (a) Define the following terms; (03 marks)

Wiki

- A wiki is a website that allows collaborative editing of its content and structure by its users.

Web portal

- This is an internet based website that can perform many electronic functions and provide the user with quick access to a variety of information and services.

Blog

- A blog is a discussion site published on the World Wide Web and consisting of discrete posts typically displayed in reverse chronological order.

(b) State the type of organizations with the following top level domains. (02 marks)

.mil – Military.

.ac – Academics.

13. (a) Distinguish between a transfer rate and access time as applied to secondary storage devices (02 marks)

- Transfer rate is the speed at which data, instructions and information move to and from a storage device and computer memory **while** access time is a measure of the amount of time it takes a storage device to locate and item on a storage medium.

(b) Explain any three ways of caring for CDs and DVDs. (03 marks)

- i. Do not expose the disc to excessive heat or sunlight.
- ii. Do not stack discs.
- iii. Do not touch/ write on the underside of the disk.
- iv. Do not bend the disc.
- v. Do not drop the disc to the ground.

14. (a) What is a software version? (01 mark)

- A software version is a new updated software released from the earlier release of the same software.

(b) Software is easily known to be affected by computer viruses which corrupt almost all files and other software to hinder their functionality. Define a computer virus? (01 mark)

A computer virus is a malicious code/ program designed to infect and disorganise the normal function of the computer system.



(c) Describe any two symptoms of computer viruses to software and hardware. (02 marks)

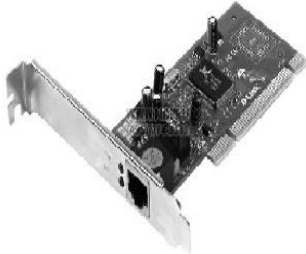


- i. Computer runs slower than usual.
- ii. Computer stops responding.
- iii. Corruption of files in the computer.
- iv. Usual error messages i.e. your disk space is running low.
- v. Disk drives and other system resources become inaccessible. *Any 2x1 = 2marks*

(d) State any one antivirus program you know. (01 mark)

- Kaspersky, Avira, Avast, Norton, Smadav. *Any 1x1 = 1mark*

15. Identify the following devices and state the function of each.

DEVICE	NAME	FUNCTION
	Microphone.	Used to input voice signals.
	Wireless Access Point or Access point.	Connects wireless communication devices together to form a wireless network.

	<p>Network interface card</p>	<p>Provides an interface between the network operating system and the networking devices.</p>
	<p>System Fan</p>	<p>Used to cool and regulate processor temperature.</p>
	<p>CD-RW Drive</p>	<p>Used to read from and write to CDs and DVDs.</p>

16. What is recent in the minds of most Ugandans in IT world is **digital migration**

(a) Briefly describe the concepts of

i. **Digital divide.** (01 mark)

- Digital divide is a term that refers to a gap between demographics and regions that have access to modern information and communications technology and those that don't or have restricted access.

ii. **Digital migration.** (01 mark)

Digital migration is a process of moving from analogue to digital broadcasting

(b) State **three** benefits Uganda has drawn from digital migration. (03 marks)

- i. It has free spectrum for other uses e.g. wireless broadband, telephony etc.
- ii. Digital migration enabled interactive video and data services that is not possible with analogue technology.
- iii. It has promoted efficiency in bandwidth usage
- iv. Delivers high quality images than analogue technology.
- v. It provides automatic tuning and selection of channels. Etc. *Any 3x1 = 3marks.*

17. (a) Differentiate between a **server** and a **client computer**. (02 marks)

A server is a computer on a network that controls and manages the network resources, making them available to its clients **while** a client computer is a computer that is connected to the network server to receive services from the server.

(b) What is the function of each of the following network devices? (03 marks)

i. Switch

- A switch is a high speed device that maintains a bridging table, keeping track of which addresses are located on which network segments.
- Is a device that forwards and filters chunks of data communication between ports based on the MAC Addresses in the packets.

ii. Router

- A router is a device that links one network to other physically and logically separate networks.

iii. Bridge

- A bridge is a device that links two local area networks that use the same address method or protocol.

18. Use the term below to complete the sentences that follow in (a)-(e). (05marks)

Slides transition. Animation effects. Slide layout.
Slide design. Slide show. Slide master.
Handouts.

- The visual movement from one slide to another slide is Slide transition.
- The Animation effects set up the way text/objects appear on a slide during presentation.
- The presentation of slides in a sequence on a projection screen is referred to Slide show.
- The Slide master defines the arrangement of all items that makes up a slide.
- A user can print the entire presentation on one page by printing the Handouts.

19. (a) Define the following as used in the file management system. (02 marks)

i. **File path.**

A file path specifies the unique location of a particular file in a file system.

ii. **File extension.**

File extension is a suffix at the end of a file name which identifies the type of file it represents.

(b) Using Windows 7 Operating System, outline the steps taken to create a folder in DOCUMENTS called **pre mock**. (03 marks)

- Right click empty portion in documents.
- Select new from the drop down menu.
- Select folder.
- Give the folder a name i.e. pre mock.

20. (a) Briefly describe the concept of computer ethics. (02 marks)

Ethics is a set of moral values or principals that govern the conduct of an individual or a group.

(b) State **three** unethical practices usually engaged in by ICT users. (03 marks)

- | | |
|------------------------------|---------------------|
| i. Plagiarism | iv. Cyber terrorism |
| ii. Software piracy | v. Hacking. |
| iii. Copy right infringement | |

END.