

MARKING GUIDE

840/1
COMPUTER STUDIES
Paper 1
Oct. / Nov. 2023
2¹/₂ hours

LANGO SECONDARY SCHOOL MOCK EXAMINATION ASSOCIATION

Uganda Certificate of Education

COMPUTER STUDIES

Paper 1

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

Write your name, signature, Index number in the spaces above

*This paper consists of **three** sections **A, B** and **C**.*

*Section **A** contains **20 compulsory** objective type questions. The correct alternative **A, B, C** or **D** against each question must be written in the box provided on the right hand side of each question.*

*Section **B** contains **six compulsory** structured questions.*

*Answers to Section **B** must be written in the spaces provided in the question paper.*

*Section **C** contains **three** equally weighted practical-theory questions. Answer only **one**.*

*Answers to section **C** must be written on the answer booklets provided*

*Any additional questions(s) answered will **not** be marked*

For Examiners' Use only

MCQ	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	TOTAL

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Turn Over

SECTION A: (20 MARKS)

*Answer **all** questions in this section.*

1. Which of the following was development during the mechanical era (1623-1945?)
 - A. Analytical Engine
 - B. Transistors
 - C. Vacuum tubes
 - D. Abacus

A
2. Output which is made up of pictures, sound and video is best describe as
 - A. Multi aspect
 - B. Graphic
 - C. Multimedia
 - D. Hardcopy

C
3. The use of the mouse and hand held pointing devices was a development of:
 - A. First generation
 - B. Second generation
 - C. Third generation
 - D. Fourth generation

C
4. Rights enforceable by law accorded to a develop of software is called
 - A. Patent right
 - B. Copyright
 - C. Trade secret right
 - D. Trademark

B
5. What major invention defined the second generation of computers?
 - A. Magnetic core
 - B. Machine language
 - C. Microprocessors
 - D. Transistors

D
6. Which of the following is a set of input devices only?
 - A. Mouse, scanner and printer
 - B. Barcode reader , printer and Mouse
 - C. Trackball, Projector, and scanner.
 - D. Keyboard, scanner and joystick

D
7. Small device programs that tell the operating system how to communicate with the device are known as?
 - A. Programs
 - B. Device drivers
 - C. Software
 - D. Instructions

B

8. Combining a list of names and addresses onto a letter template to reflect a more personalized letter, uses which word processing task?

- A. Emailing
- B. Printing Results
- C. Find and Replace
- D. Mail merging

D

9. Theis created by presentation software

- A. File Structure
- B. Navigation action buttons
- C. Logical function during manipulation of data
- D. Carbon copy in an email message

B

10. Restarting a computer using control keys can be technically called.....

- A. Booting
- B. Soft booting
- C. Hard booting
- D. Packet switching

B

11. <https://www.cityhighschool.ac.ug> is an example of:

- A. An e-mail address of an organization.
- B. An access code of a network.
- C. A server.
- D. A URL (Uniform Resource Locator).

D

12. The startup computer instructions on **boot up** are found in.....

- A. CONFIG SYS
- B. CPU
- C. ROM BIOS
- D. REGISTER

C

13. The link of one or more computers together to communicate and share resources is called

- A. Networking.
- B. Transmission.
- C. Packet switching.
- D. On-line browsing.

A

14.is an address that does not change when a formula is copied to another location in spreadsheet.

- A. Formula address.. C. Relative address.
B. Mixed address. D. Absolute address.

A

15. Which of the following is an interactive computer program that helps users solve problems?

- A. Robot
B. Perception system
C. Expert system
D. Natural language

C

16. The process through which data from a sending device is converted into signal which the communication medium can carry is known as

- A. Transmission
B. Encoding
C. Uploading
D. Decoding

B

17. To connect a computer to a network, a user's machine should have a(n)

- A. NIC
B. RJ45
C. IP
D. ISP

A

18. Which one of the following is not a function of a web-server?

- A. Facilitating downloads to be made for a remote computer
B. Facilitating uploads
C. Keeping uploads
D. Information search

C

19. In database, a query is.....

- A. Used to extract specific information from a table
B. graphic representation used to enter data into a table
C. a particular listing with a file.
D. Set of commands that can be used to automate database tasks.

A

20. Unauthorized access through a computer's firewall is termed as

- A. Script kidding
B. Cracking
C. Hacking
D. Piracy

C

SECTION B (60 MARKS)

Answer **all** questions in this section.

All answers must be written in the spaces provided.

21 (a).Distinguish between computer generations and computer evolution. (2 marks)

Computer generation was a gradual development or advancement in technology entailing computer technology over years **or** is the state of improvement in the development of computers over years **while**

Computer evolution refers to the historical developments through which computer technology has existed right from the start to the current time

(b). State three characteristics of computing devices developed during the mechanical era (3 marks)

- The machine develop in this period could perform all the arithmetic operation of add, subtract, multiply and divide numbers
- The machine developed in this era had moving parts
- They had a set of gears
- They had set of dials
- They had limited memory for storage
- Most of them were made to order (one – instruction at a time).
- They used punched cards and tapes for storage
- They were very slow in processing
- They carried on single task

c) i) State two ways a computer user can safeguard his or her computer against effects of computer crime. (2 marks)

- Use of username and password
- Use updated antivirus software
- Use of firewalls
- Data encryption
- Use of biometric devices
- Use of audit trail
- Protecting computer hardware by locking them in strong rooms and CCTV cameras.

ii) The Government of Uganda through its agency Uganda Communication Commission (UCC) intends to establish a computer laboratory in your community. Prepare a checklist of code of conduct that users have to observe in the computer laboratory. (3 marks)

- Avoid overcrowding in the computer laboratory

- *Eating and drinking in the lab is not allowed*
- *Avoid playing in the computer lab*
- *Problem with computer lab equipment should be reported to the lab attendant.*
- *Avoid posting/sending harassing messages*
- *ICT computing resources may not be used for illegal or disruptive purposes*
- *Do not remove any equipment in the lab without permission*
- *Avoid displaying offensive graphic images such as pornography. This may psychologically affect others.*
- *Avoid using computer during heavy storm*

22. (a). Suggest three reasons to explain why majority of the computer programs are generally supplied on a computer disc. (3 marks)

- *Compact disc are not easily infected by virus*
- *Information on CD ROM is stored permanently and cannot be deleted.*
- *Compact disc has high access speed*
- *Compact disc are portable*
- *Compact disc has relatively large storage space*
- *Cheaper in cost*

(b). Give two specialized characteristics of optical storage media. (2 marks)

- *They are flat circular disc.*
- *Data is stored and read by using laser (optical) technology*

c) (i) Identify two configuration information to look at on a new computer before buying (2 marks)

- *Hard disk size*
- *Amount of RAM*
- *Processor speed*
- *Chip set type*

(ii) State three reasons under what circumstance may computer technician uninstall a computer program (3marks)

- *If the computer program is not working properly due to corrupt file, or improper installation*
- *If the computer program is outdated.*
- *If the computer program is no longer being used*
- *If the computer program is conflicting with other computer program*
- *If the computer is running out of disk space*
- *If the computer program is not meeting the expectation of the user*

23) Write down a function you would use to perform the following in a spreadsheet program:

(i). Position of each student basing on the total marks. (1mark)

- *Rank*

(ii). Adding up scores for four subjects. (1mark)

- *Sum*

(iii). Determine the largest value in a selected range of cells. (1mark)

- *Max*
- *Large*

(b). Explain the following error messages displayed in a spreadsheet program:

(i). ##### (1mark)

- *The error occurs when a column is not wide enough*

(ii). #DIV/0! (1mark)

- *The error occurs when a number is divided by zero (0)*

(iii). #Name? (1mark)

- *This error occurs when Microsoft office excel does not recognize text in a formula*

c) List down four examples of field properties in a database (4 marks)

- | | |
|--------------------------|------------------------------|
| • <i>Field format</i> | • <i>Indexed</i> |
| • <i>Field size</i> | • <i>Smart tags</i> |
| • <i>Default Value</i> | • <i>IME mode</i> |
| • <i>Caption</i> | • <i>Unicode compression</i> |
| • <i>Text align</i> | • <i>IME Sentence Mode</i> |
| • <i>Validation rule</i> | • <i>Input mask</i> |
| • <i>Validation text</i> | |
| • <i>Caption</i> | |

24a) State two factors that lead to the loss of signals during transmission (2 marks)

- *Bad weather/environmental condition which leads to signal to travel lesser distance*
- *Faulty or poor quality hardware equipment*
- *Distortion due to change of shape of signal which may be caused by attenuation*
- *Presence of Noise (unwanted signal)*
- *Interference from other signals*

b) With an example, describe the main parts of an email address (5 marks)

- **User name:** *this specifies the identity of the recipient of the email*
- **@:** *this symbol acts as a separator between the username and domain name.*
- **Domain name:** *this identifies the domain that hosts the email account*
- **Dot(.):** *this separates the domain name and top level domain name (domain type)*
- **Top level domain:** *This specifies the category of the domain*

(d) State the use of each of the following in relation to webpage (3 marks)

- (i) **Radio buttons:** *These are buttons in a web page that lets a user to select only one of a limited number of choices.*
- (ii) **Check box:** *This let a user of select one or more options of a limited number of choices*
- (iii) **Drop down arrows:** *These are used to open dropdown menus.*

25 a) Define the term proof reading as used in word processing (1 mark)

This is editing activity that allows a user to check whether the document has spelling or grammatical errors.

b i) Mention any three word processing tools used for proof reading (3 marks)

- *Spelling and grammar checker*
- *Thesaurus*
- *Auto complete*
- *Auto correct*

ii) State the commands that are executed in word processing using the following keyboard shortcuts (2 marks)

- i. Ctrl + M: *Is use for indenting a paragraph.*
- ii. Ctrl + =: *is for Subscript of a letter, character*

c) Your school has requested you to design a presentation show using any presentation software about the benefits of ICT at your school. Identify four qualities to consider when designing a good presentation show. (4 marks)

- *Use simple background*
- *Text should be clear and that it can be seen from a distance*
- *There should be no clash between text colour and the background colour*
- *Use relevant pictures*
- *Keep animations consistent in the presentation*
- *Apply uniform transitions throughout the presentation*
- *Insert your picture in the appropriate place*
- *For automatic presentation rehearse the timing*
- *Avoid excessive use of animation and tansition in the presentation*

- *Include only main points*
- *Establish a uniform, single look for the presentation*
- *Present information consistently*

26a) Mention two ways through which computer software can be acquired (2 marks)

- *Buying standard software from vendors or software companies.*
- *User developed software (in-house/tailor made software)*
- *Downloading it from the internet*

b) Identify five items that should come along with authentic software (5 marks)

- *License*
- *Installation guide*
- *Reference guide*
- *Provision for trial version*
- *User manual*

c) List three stages involves in programming process. (5 marks)

- *Defining the problem*
- *Planning the solution*
- *Coding the program*
- *Testing the program*
- *documenting the program*

SECTION C: (20 MARKS)

*Answer only **one** question from this section. Answers to the question **must** be written in the answer booklets provided.*

27) Explain computer hardware devices used for information processing. (20 marks)

Computer hardware's are the physical parts of the computer which can be seen, touched and picked up.

Computer hardware use for information processing is made up of:

- *input devices*
- *processing devices*
- *output devices*
- *storage devices*

Input devices

These are devices that are used to enter or feed data and instruction into the computer.

Each input device input data in a unique way depending on the type of data being input. The data may be graphics, sound or characters.

Example of input devices include: keyboard, mouse, touch screen, touch pad, track ball, joystick, light pen, stylus and graphic tablets, barcode reader, web cam, sensor and remote sensor, PC camera, microphone, digital camera, digital video camera biometric devices, scanner etc.

Processing devices

These are computer hardware devices that work together in gathering, decoding and outputting of information to the computer user.

They are electronic components and chips housed in the system unit.

The central processing unit (CPU) is entirely responsible for document processing in the computer system. The CPU is a part of the computer circuitry that performs data manipulation. In other words it controls and coordinates the activities of all other components of the computer system and performs all the arithmetic and logical operation to be applied to the data.

On personal computer the CPU is usually housed in a single chip called the microprocessor. The CPU is made of three main parts.

- *Control unit*
- *Arithmetic and logical unit*
- *Registry (memory)*

Output device

Output devices are hardware equipment's used to displays information to the user inform of softcopy and hard copy.

Example of output devices include: monitor, Printer, Speaker, Projector, Facsimile machine, terminal

Storage devices

These are hardware device that writes and reads data to and from storage media. There are two type of storage devices commonly used:

- *Primary memory*
- *Secondary or Auxiliary storage devices*

Primary memory is where both data and instructions are temporarily held for immediate access and use by the computer's microprocessor.

Secondary storage is storage devices that retain data and instruction in a relatively permanent form. Example include: hard disk, flash disk, compact disc, Digital video disc, magnetic tape.

Introduction of hardware.....04 marks

Stating hardware..... 01 mark

Description of the hardware..... 02 marks

Giving example of hardware 01 mark

28) In the present days, internet has increasingly become essential tool for work in different sectors including education. Explain the effects that education sectors are facing due to the use of internet today. (20 marks)

- *Cheap and faster mode of online communication e.g. through email, Whatsapp, telegram, Skype etc.*
- *It has ease on online research for information using search engines and directories*
- *Online shopping for items such as books are made easy and less expensive.*
- *Ease on collaborative learning*
- *Ease on distance learning for those who are unable to attend college/school physically.*
- *Discussions over educational chat rooms*
- *Ease on downloading of relevant documents*
- *Online advertisement*
- *Enable electronic money payment of school fees through mobile money transfer, Sante money*
- *Online entertainment for students*
- *Formation for forums where teachers and students can participate in different types of discussion and express their views and gather valuable knowledge.*

The draw backs

- *Decline of students moral due to access to illicit materials like Pornography.*
- *It is expensive and drains school financial resources.*
- *Computer viruses are easily spread over internet.*
- *Some sites give outdated information because they are not regularly updated therefore misleading.*
- *Theft of personal information. This is common when using unsecure connections.*
- *There is no privacy of information and information piracy is common*
- *Addiction by some learners and teachers*
- *Hacking*
- *Spamming*

x1 mark for stating a point

x1 mark for explanation

29a) The school secretary of XY high school uses computer to carry out his daily school secretarial work. As a student of computer studies, explain to the school secretary the observable symptoms he can base on to conclude that his computer has malware. (10 marks)

- *Computer run slower than usual*
- *Computer stop responding*
- *Computer restart on its own*
- *Some computer programs do not work correctly.*
- *Antivirus may be disable for no reason*
- *New icons appear on the desktop*
- *Program disappears from the computer even though you did not uninstall it*
- *It shut down unexpectedly*
- *Limited memory space*
- *Limited hard disk space*
- *Antivirus cannot be installed on the computer*
- *Program size change from the installed version*
- *Files may be change as short cut*

b) Explain the various measures that the school secretary should put in place to safe guard his computer against malware (10 marks)

- *Installing updated antivirus software: this helps to detect, delete and prevent malware from infecting computer.*
- *Scanning all external storage devices for possibilities of virus infections, before using these devices with other computers*
- *Avoid downloading content from the internet without being sure of their safety*
- *Install firewall to filter incoming traffic on the network*
- *Protect your computer by limiting other people to use it with external storage devices.*
- *Use of user name and password to prevent unauthorized use of the computer.*
- *Avoid use of pirated software.*
- *Avoid use of storage devices from un trust source.*
- *Carry out regular backup of data*

x1 mark for stating a point

x1 mark for explanation