

Teacher's Guide

Candidate's Name:

Random No.

Personal No.

Signature:

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

S850/1

Subsidiary Information
and Communication

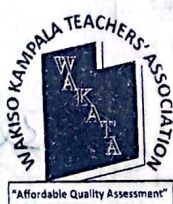
Technology

Paper 1

Jul./Aug. 2023

2½ hours

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WAKISO-KAMPALA TEACHERS' ASSOCIATION (WAKATA)

WAKATA MOCK EXAMINATIONS 2023

Uganda Advanced Certificate of Education

SUBSIDIARY ICT

Paper 1

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

Attempt all questions in this paper

The paper consists 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) List any three parts of central processing unit.

(03 marks)

Arithmetic Logic Unit
Memory Register
Control Unit

(b) Define the following terms

(i) Data bus

Pathway for transmission of data between processor & other components. (01 mark)

(ii) Address bus

It identifies the address of the location that is to be read from or written to. (01 mark)

2. (a) Give the function of the following equipments in the computer lab

(03 marks)

(i) Fire extinguisher

To put off fire in case of outbreak

(ii) Air Conditioner

To regulate the temperature of the computer laboratory

(iii) Woolen carpet

To trap dust

(b) Give any two safety precautions intended to protect the user that should be considered when setting up a computer lab.

(02 marks)

Proper insulation of wires.
Proper ventilation.

3. (a) Study the file path below and answer the questions that follow.

C:\Admin\Desktop\Exams\Mock\ICT2019.pdf.

(i) What is the root directory in which the above file is stored?

C:

(01 mark)

(ii) Identify any one computer program that can be used to open the above file.

Adobe Acrobat reader

(01 mark)

(iii) What is the file name of the file stored in the path above?

ICT 2019

(01 mark)

(iv) In which folder is the file saved?

(01 mark)

Exams

(b) The above computer file could alternatively be saved with a .docx file extension.

Name any computer program that would open this file.

(01 mark)

Microsoft Office Word

4. Write the following in full

(i) CAD

(01 mark)

Computer Aided Design

(ii) BIOS

(01 mark)

Basic Input Output System

(iii) ENIAC

(01 mark)

Electronic Numerical Integrating Computer

(iv) CMOS

(01 mark)

Complementary Metal Oxide Semiconductor

(v) SATA

(01 mark)

Serial Advanced Technology Attachment

5. (a) Your Computer teacher finds it more convenient to use a computer when setting exams than manually setting with pen and paper. Give reasons why it so.

(03 marks)

- There is provision for final review
- It is easy to correct error before printing
- There is no wastage of stationery

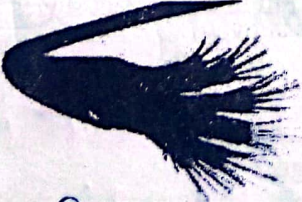
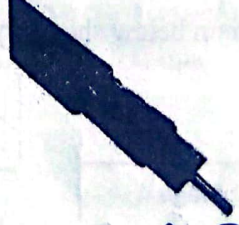
(b) Give two challenges that your teacher may encounter when using a computer.

(02 marks)

- Power fluctuations before saving can lead to loss of work
- Requires use of a computer

6. (a) Name the data transfers in cables in the diagram below

(03 marks)

Cable			
Name	Fiber optic cable	Shielded twisted pair cable	Coaxial cable

Turn Over

(b) Identify any two of the cables above and state one area of application where each cable is used.

Coinal Cable - For broadband telecommunications (02 marks)
 Fibre optic Cable - for long distance data networking.

7. (a) With an example, define the term device drivers. (02 marks)

A special software that allows communication between a hardware device and a computer.
 for example printer drivers.

(b) It is said that "A computer system without operating system is rendered useless".

Give three functions of the operating system

(03 marks)

- Memory management
 - Booting process
 - Hardware and software management

8. A book shop owner uses a spreadsheet to calculate profits. This is part of the spreadsheet.

	ISBN A	Cost B Price (\$)	Selling C Price (\$)	Profit D Per book (\$)	Number E sold	Total F Profit (\$)
1						
2	0-34-080006-2	22	29	7	32	224
3	0-52-154540-4	26	35	9	45	405
4	0-74-879116-7	15	21	6	32	192
5	0-34-081639-2	33	41	8	89	712

(i) Which row contains labels?

(01 mark)

Row 1

(ii) Give the cell reference of the cell that contains 0-74-879116-7.

(01 mark)

A4

(iii) Write down the formula which has been entered in cell F2.

(01 mark)

= D2 * E2

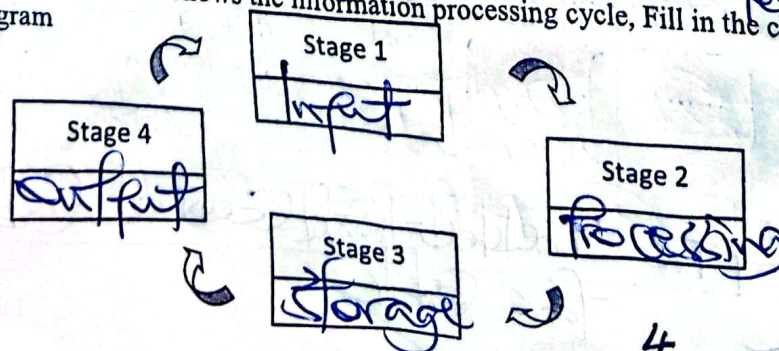
(b) Give two differences between a label and a value as applied to spreadsheet.

(02 marks)

Values can be used for calculations unlike labels.
 Values are in numerical format while labels are in text format.

9. (a) The block diagram below shows the information processing cycle, Fill in the correct stages in the block diagram

(03 marks)



- (b) Assume you the examinations assistant of a certain school and directly in charge of making student's report cards, identify any kind of data or activity related to stage 1 and stage 4 of the diagram above. (02 marks)

Stage 1..... *Entry of Marks*
 Stage 4..... *Printing of report cards*

10. (a) The prolonged use of computers can lead to health and safety problems. Tick (✓) two health problems that may be caused by prolonged use of computers. (02 marks)

	Tick (✓)
RSI	✓
Influenza virus	
Blood poisoning	
Headaches	✓

- (b) Suggest three ways of preventing the above healthy problems. (03 marks)
- Use of a good posture when using computers*
 - taking regular breaks*
 - Practising breathing exercises*

11. (a) Define the term POST as applied to booting. (01 mark)
- Power On Self Test Confirms Whether devices attached are ready to work*

- (b) Give three reasons why a user may restart a computer. (03 marks)
- When it is slow*
 - After installing a program*
 - When a new hardware device is attached.*

- (c) Mention any one computer shortcut that can perform soft reset on a computer system. (01 mark)
- Ctrl + Alt + Del*

12. (a) What is the role of the following IT personnel in the field of computing and technology?

(i) Programmer *Invent a code for computer programs* (01 mark)

(ii) Database administrator *Manager data entry rules for a database* (01 mark)

(iii) Systems administrator *troubleshoots and maintain computer systems* (01 mark)

- (b) Mentioned any other two carriers in computing apart from the one mentioned above. (02 marks)
- Software developer*
Hardware engineer

13. As an IT student in charge of media, you want to distribute a video file that was recorded at your hand over ceremony, how many 700 MB CDs will you need to share a 20GB video file with 50 students of your class. (05 marks)

$$\begin{aligned} 1 \text{ GB} &= 1024 \text{ mB} \\ 20 \text{ GB} &= 1024 \times 20 \\ &= 20480 \text{ mB} \\ \text{No of CDs per student} &= \frac{20480}{700} \\ &= 29.3 \text{ CDs} \\ &\approx 30 \text{ CDs} \\ \text{50 students will need} &= 30 \times 50 \\ &= 150 \text{ CDs} \end{aligned}$$

14. (a) A hospital uses computers to monitor the health of patients. Give three advantages of using computers rather than nurses to do this. (03 marks)

- Computers are diligent
- Computers are accurate
- Computers are versatile

- (b) Explain why analogue to digital conversion is needed when computers are used in monitoring and measuring. (02 marks)

To make it easier to process and store information.

15. Many companies use video conferencing instead of face to face conferencing. Discuss the advantages and disadvantages of this. (05 marks)

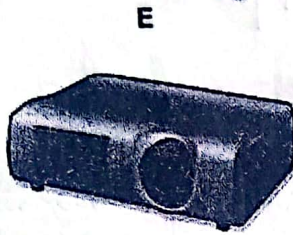
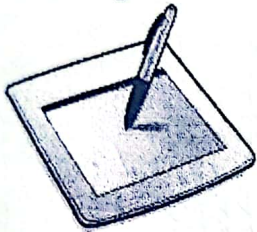
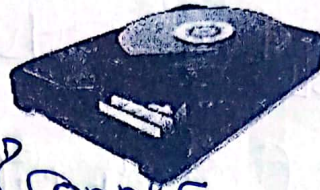
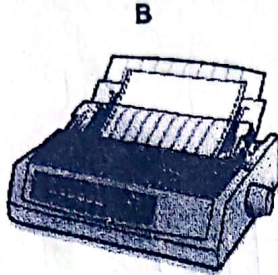
Advantages

- Save time
- Makes scheduling meetings easier
- Streamlines Collaboration

Disadvantages

- High initial investment cost
- Technical breakdown
- Privacy and security concerns

6. Name the hardware devices labeled A, B, C and D. (05 marks)



A: Scanner
B: Printer
C: Vinyl player
D: Graphics tablet/stylus
E: Projector

17. (a) Name two network devices that could be used to connect a LAN to a WAN. (02 marks)

Router
Modem

(b) Give two differences between a WAN and a LAN. (02 marks)

WAN LAN
- Connect users across the globe - Connect users in close proximity
- Connect many users - Limited number of users

(c) Give one example of a WAN network. (01 mark)

A bank; All its branches across the world.

18. (a) Students can use CDs or pen drives for storing their work. (03 marks)

Give three reasons why students may prefer to use pen drives.

- Portability
- They are reusable
- Easy to use

(b) Give two advantages of using online storage other than storage on local computer storage devices. (02 marks)

- Easy accessibility
- No risk of data loss

19. Students of a computer class were sent out to make research on how different hardware components look like and how they function, a lot of notes and pictures were taken. On coming back to school they were required to compile and print their reports. Their teacher has suggested a dot matrix printer and the students suggested a LaserJet printer. (02 marks)

(a) Give two reasons why the teacher has suggested a dot matrix printer.

- Low printing cost
- Durable

(b) Give three reasons why the students have suggested a LaserJet printer. (03 marks)

- Fast printing speed
- Good quality output
- More efficient

20. A school library has a file for storing details of the books it has and a file for storing details of its borrowers. The two files are linked using a common field.

Book File

Code	Title	Author	Published	Number in stock	Cost
1857028898	The Code Book	Simon Singh	1999	2	Ush. 10,900.
0747591054	The Deathly Hallows	J K Rowling	2007	8	Ush. 17,500.
0748791167	Sepulcher	Kate Moses	2007	3	Ush. 18,450.
0563371218	Full Circle	Michael Palin	1997	1	Ush. 19,200.

Borrower's File

Number	Name	Form	Book Borrowed	Due Back
0102	Nambasa Irene	S.4	1857028898	14/06/2010
1097	Lunkuse moreen	S.2	0747591054	12/06/2010
0767	Lwamugisha Ibra.	S.1	0748791167	06/06/2010
0611	Kwikiriza Innocent	S.3	0563371218	08/06/2010

(a) How many records are there in the book file? (01 mark)

Four records

(b) How many fields are there in the borrower file? (01 mark)

Five fields

(c) What type of database do these two files form? (01 mark)

Relational database

(d) Give two reasons why this type of database system is used rather than having two flat files. (02 marks)

- Access is restricted through user permissions
- Has a wide range of data types

END