

NAME: ADM NO: Class

CANDIDATES SIGNATURE: DATE:

451/1

KCSE COMPUTER STUDIES PAPER 1 - THEORY

FORM 2

FEBRUARY -2018

MID TERM EXAMINATIONS

TIME: 2 ½ HOURS

Teacher Copy

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ST. CLARE GIRLS HIGH SCHOOL - GATUNDU

Kenya certificate of secondary education (K.C.S.E)

Instructions to candidates.

- a) Write your name and index number in the spaces provided above.
- b) Sign and write the examination date.
- c) Answer all the questions in the spaces provided in the question paper.
- d) Write your answers in English
- e) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

Candidate's score	Maximum score
	100
Teacher's Comment:	

*This paper consists 9 of printed pages
Candidates should check to ascertain that all pages are printed as indicated and that no question is missing.*



1 a) Name the **two** buttons on top of a mouse 2 mk

Left and Right Mouse button

b) Of the mouse buttons named in (a) above, which button displays a drop down list of commands when pressed? 1 mk

Right Mouse button

2 Match the following keys on the keyboard with their corresponding categories 5 mks

a) Keys	Category
c i. Alt, ctrl, Shift, esc	a) Cursor movement and editing keys
e ii. A-z, ?, ', [, 1, 2, 3	b) Numeric keypad keys
b iii. 0, 1, 2, 3 - 9, +, -	c) Special PC operation keys
d iv. F1, F2; F12	d) Function keys
a v. Arrow keys, page up, ...	e) Alphanumeric keys

two

3 Write the following acronyms in full:

a) BIOS **BASIC INPUT OUTPUT SYSTEM** 1 mk

b) POST **POWER ON SELF TEST** 1 mk

4 State the **three** uses of a UPS (uninterruptible power supply) 3 mks

1. Filter Power entering the computer
2. Alert users when power goes off
3. Saves power for some time

5 Distinguish between:

a) Super computers and micro computer 2 mks

Super are large Micro are small
 Super are Powerful Micro are not so powerful
 Super store more information and has high memory
 Micro are not

b) Digital computers and analogue computers 2 mks

Digital computers process data that is discrete
 Analogue computers process data that is analogue.

Digital computers work with numbers
 but analogue computers work with physical quantities or quantities that vary such as temperature, speed etc.

1. Computer Memory cannot forget easily, Human Memory forgets easily

2. Human Memory stores less information than Computer Memory

c) Computer memory and human memory

2 mks

3. Computer Memory uses electrical signals, Human Memory uses human cells for function

4. Computer Memory is faster in retrieval of information than human memory.

d) Main frames and laptops

2 mks

- Main frame is large fast in processing, High memory and storage capacity than laptops

- Laptops are portable, Mainframe are not.

6. What is the main purpose of a VDU?

1 mk

- To show the user what is happening at the device

7. State three functions of a computer

3 mks

1. Process
2. Input
3. Output

8. State two uses of computers in each of the following application areas

a) Hospitals

2 mks

1. Diagnose patients
2. Security
3. Keep records and manage
4. Control automated operations

b) Supermarkets

2 mks

- Stock control
- Point of sale terminal
- Security
- Keep records

c) Agriculture

2 mks

- Keep records
- Automate farming tools and operations
- Diseases and pests control and research
- Commerce or market access



2 mks

d) Government

1. Manage workers
2. Security
3. Keep records

e) Media

2 mks

1. Production of programs
2. Entertainment
3. Security

9 State two reason why computers should be shut down using the right procedure. 2 mks

1. To avoid damaging files such as startup files
2. To avoid destroying Memory Storage devices
3. Scatters files (fragmentation)

10 State any three differences between second generation computers and fifth 3 mks

generation computers.

Second	Fifth
1. Large in size	1. Small in size
2. Less powerful.	2. Portable
3. Generated alot of heat	3. Uses Artificial intelligence (AI)
4) Used Transistors	4 uses VLSI
	5 Very powerful.

11 Distinguish between cold booting and warm booting 2 mks

Cold booting

Warm booting

Starting a computer that was originally off

Restarting a computer

13 Briefly explain two similarities and two differences between human beings and computer systems 4 mks

Similarity

- Both can process data to information
- Both can store information
- Both can be heuristic i.e can move as a robot
- Both can decide

Differences

- Humans can get tired
- Computers use electricity
- Humans make and program computers
- Computers are fast and efficient in processing than humans.



14 Why is it advisable to install security alarms in the computer laboratory? 1 mk

Just in case burglars strike, the alarms will alert security men for security of computers

15 Define the following terms as used with computers

a) Artificial Intelligence 1 mk

It is an area of computer science that emphasizes the creation of intelligent machines that work and react like humans

b) Bytes 1 mk

This is the units of measuring the computer memory.

c) GIGO - Garbage In Garbage Out 1 mk

It is a phrase that is used to refer to what is programmed of a computer is what it will provide output

e) Power Surge 1 mk

Refers to unstable power / ~~up~~ abnormally high voltage lasting for a few seconds

f) Hertz 1 mk

Unit for measuring computer speed / frequency

17 Describe the following terms in relation to the usage of a computer mouse

a) Scrolling 1 mk

Moving a mouse on a flat surface to move the pointer on the screen.

c) Mouse Pointer (cursor) 1 mk

It is a feature on the screen that responds to mouse movements and executes when mouse buttons are pressed.

18 State any three safety precautions that should be observed in the computer to avoid destruction of computers 3 mks

1. Avoid dust
2. Protect computers with UPS or AVS
3. Avoid dampness in the computer laboratory
4. Avoid unnecessary aimless movements
5. Avoid entry from the laboratory.



19 Describe any **two** factors to consider when constructing the computer laboratory. 2 mks

1. Direction of wind & Direct sunlight
2. Costs
3. Size of Land
4. Number of Computers to be installed
5. Number of Students to use.

20 Every time she saved her work in the flash disk, Mokeira could not locate it from another computer. State any **three** factors that may have caused this phenomena. 2 mks

Malfunctor or (different ports)

1. Virus Infection - Run antivirus software or anti malware.
2. Software Incompatibility - The two computers must have been using different operating systems use same
3. Flash disk driver did not install in the destination computer solution - eject and insert again

21 Match the following technological advancements against the generation of computers they were used:

- | | | |
|----------------------------|----------------------|-------|
| 1. VLSI (d) | a) SECOND GENERATION | 4 MKS |
| 2. VACUUM TUBES (c) | b) THIRD GENERATION | |
| 3. TRANSISTORS (a) | c) FIRST GENERATION | |
| 4. INTEGRATED CIRCUITS (b) | d) FOURTH GENERATION | |

22 Fill the blank spaces below:

i Charles Babbage discovered the analytical engine and is also referred to as the father of modern computers. 1 mk

ii The first computer was referred to as Abacus. 1 mk

iii Analogue, Digital and Hybrid is the classification of computers in terms of functions. 3 mks

iv The CPU of a microcomputer is also known as Microprocessor. 1 mk

v Power Supply Unit (PSU) is a component in the computer chassis used to convert alternating current to direct current for consumption by the computer. 1 mk



- vi Keyboard/pad is a peripheral device used to enter data inform of text into the computer. 1 mk
- vii It is an input device and also a pointing device used specifically to play games with the computer. Its name is? Joystick 1 mk
- vii Tablet & light pen is a gadget that can be used to input digital signatures into the computer. 1 mk
- viii Clicking is a term used to refer to pressing the mouse button once. 1 mk
- ix RAM/ROM is a device that temporarily stores data in the computer. It is also referred to as the computer memory. 1 mk
- x The Fan and the Heat sink work hand in hand to cool down the CPU during processing. 2 mks

23 a) Why is a computer referred to as an electronic device? 1 mk
It uses electrical signals to process

b) State two safety precautions used in the computer laboratory to ensure that computer users (liveware) are not susceptible to electrical shocks. 2 mks

- 1. Insulating of electrical cables
- 2. Avoiding dampness in the computer lab
- 3. Power cables should pass through trunk

c) Most computer failures are caused by Dust and Dampness 2 mks
Virus or Unprocedural shutdown of computer.

d) Distinguish between the CPU and the System unit 2 mks
CPU is the brain of the computer
System unit hosts the CPU and other devices and help the CPU to process

e) Describe the correct procedure that is normally used by computer users to start up computers 3 mks

- 1. Switch on the electrical power
- 2. Switch on the UPS
- 3. Switch on the screen
- 4. Switch on the chassis
- 5. Enter username & password to start accessing



f) Describe the correct procedure that is normally used by computer users to shut down computers

3 mks

- ① click start button
- ② point to the ~~start~~ ^{check on} button to shutdown
- ③ Switched off the Monitor, the UPS and Power Sockets

24

After switching on her computer, Boke discovered that it was taking a lot of time to start contrary to what she was used to. State four reasons that may have caused Boke's computer to delay in booting and give a solution in each reason.

8 mks

- | | |
|--|--|
| ① Fragmentation of files | - Run disk Defragmentor |
| ② Computer Virus | - Run antivirus |
| ③ Destroyed/corrupted Master boot records | - Rerun the system disk |
| ④ Destroyed disk surface | - Run scandisk or chkdsk command on dos. |
| ⑤ Network requests | - Can do nothing |
| ⑥ Startup programs running on the background such as antivirus | - Clear Startup Program |
| ⑦ Changed settings of BIOS - Pass | - Reset BIOS to default settings |

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