

NAME: ADM NO.:

CANDIDATE'S SIGNATURE: DATE:

COMPUTER STUDIES (451)

FORM 2 OPENER C.A.T

Theory

MAY - 2018

Time: 90 MINUTES

Score: _____
70

FOCUS A365

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ST CLARE GIRLS HIGH SCHOOL - GATUNDU

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

Answer All Questions Provided in This Question Paper [70 marks]

1. State any **five** uses of computers in the following areas;

- a. School **[5 marks]**

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- b. Supermarket **[5 marks]**

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2. State **two** reasons why booting procedure is necessary. **[2 marks]**

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.....

3. Other than the mouse, list any other **three** input devices. **[3 marks]**

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4. State any **three** devices housed in the computer chassis and describe their uses. **[6 marks]**

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5. Give **three** reasons why computers should be shutdown with the right procedure. **[3 marks]**

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6. State **four** reasons why a calculator is regarded as a computer. **[3 marks]**

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7. Name the technology that was used to develop the following generations of computers.

[4 marks]

- a. First generation
- b. Second generation



- c. Third generation
- d. Fifth generation
8. State any **four** types of scanners and state whether they are optical or magnetic. **[4 marks]**

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9. List any **four** factors that can damage computers in the computer laboratory and state how they can be avoided. **[8 marks]**

a.
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b.
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c.
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d.
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10. State the use of the following keys of the keyboard; **[5 marks]**

a. caps lock key
.....

b. pg dn key
.....

c. end key
.....

d. spacebar
.....



e. esc key

.....
11. Match the keyboard keys below with their respective categories. [5 marks]

Keys	Category
esc, shift, ctrl, alt, ...	Function keys
h, 4, /, ?, ‘, ’, @,], ...	Numeric keypad keys
1, 2, 3, +, -, =, *, ...	Alphanumeric keys
F1, F2, F3, ..., F12	Cursor movement and editing keys
pg up, pg dn, end, enter, del, arrow keys, ...	Special PC operation keys

12. Write the following acronyms in full; [5 marks]

a. POS

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b. POST

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c. BIOS

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d. RAM

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e. ROM

.....

13. State **four** characteristics that humans share with computers. [4 marks]

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14. State any **two** machines mentioned in the history of computers after 1935. *[2 marks]*

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15. Describe the following types of computers. *[3 marks]*

- a. Super computers

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- b. Digital computers

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- c. Special purpose computers

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16. Define the following computer words; *[3 marks]*

- a. Bit

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.....

- b. Hertz

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.....

- c. Byte

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.....



Answers

1. State any five uses of computers in the following areas;

a. School [1× 5 = 5 marks]

- i. *Typesetting*
- ii. *Publishing newsletters, tutorials and modules*
- iii. *Running of security systems such as CCTV, biometric entry/exit points and alarms*
- iv. *Research work such as gathering information*
- v. *E-learning (distance learning)*
- vi. *Running of lifts and elevators at tall buildings in the school*
- vii. *Used in laboratories and workshops to run air conditioning systems and control machines*
- viii. *Used in library to run catalogue systems*
- ix. *Used for communication purposes*
- x. *Making of school's timetables*
- xi. *Producing academic reports*
- xii. *Keeping records of workers, students and assets*

b. Supermarket [1× 5 = 5 marks]

- i. *Transactions at the point of sale*
- ii. *Running of security systems such as CCTV, biometric entry/exit points and alarms*
- iii. *Research on prices and new commodities*
- iv. *Running of lifts and elevators in tall buildings of a supermarket*
- v. *Used for communication purposes*
- vi. *Producing of weekly, termly and yearly financial reports (MIS)*
- vii. *Keeping records of staff and assets*



- viii. *Running of air conditioning systems*
 - ix. *Producing advertisements on social media and print media*
 - x. *Stock control*
- 2. State two reasons for system reboot. [1× 2 = 2 marks]**
- a. *Recover from a problem such as system hung, grub*
 - b. *So that the computer can handle maintenance services such as backing up and restoring data*
 - c. *Due to power outage*
 - d. *Add or remove hardware*
 - e. *Prompts the user to save his/her work*
 - f. *Customize CMOS settings*
 - g. *Change Kernel parameters*
 - h. *Repair system configuration files*

- 3. Other than the mouse, list any other three input devices. [1× 3 = 3 marks]**
- a. *Keypad, keyboard*
 - b. *trackball, joystick, light pen*
 - c. *IWB*
 - d. *Scanning devices such as OCR, OBR, MICR and OMR*
 - e. *Digital camera*
 - f. *Digitizer*
 - g. *Touch Screen*

[Note: do not award mark if candidate listed category instead of the device itself i.e. keying devices (category) instead of mouse, trackball, joystick, lighpen (device)]

- 4. State any three devices housed in the computer chassis and describe their uses.**
- [2 × 3 = 6 Marks]**
- a. *PSU [power supply unit] - used to supply power to the motherboard and other devices. Also converts AC to DC for computer consumption*



- b. *Motherboard* – assist the CPU to process and helps other devices to communicate with each other by providing path links and interface.
- c. *CPU* – coordinate all activities, manipulate data
- d. *Hard disk* – Provide permanent storage of data
- e. *Drives* – such as DVD Drive used to read removable storage media.
- f. *Cards* – supports peripheral devices

[Any other device the examiner can moderate and approve]

5. Give three reasons why computers should be shutdown with the right procedure.

[$1 \times 3 = 3$ Marks]

- a. *To let the user save his/her work this avoids loss of data*
- b. *Save system settings to avoid corrupting/damaging system files such as startup files*
- c. *Reduce fragmentation of files this speeds up the next booting process*
- d. *Avoid damaging the surface of the hard disk and other storage devices.*
- e. *Avoid damaging application files that were currently running.*
- f. *To let the system install auto updates after download.*

6. State four reasons why a calculator is regarded as a computer. [$1 \times 4 = 4$ Marks]

- a. *It is programmable.*
- b. *It is an electronic device.*
- c. *It can process data into information i.e. input, process and output.*
- d. *It can store information and transmit it.*
- e. *It has a CPU*

7. Name the technology that was used to develop the following generations of computers

[$1 \times 4 = 4$ Marks]

- i. *First generation* *vacuum tubes/thermionic valves*
- ii. *Second generation* *transistors*
- iii. *Third generation* *Integrated circuits*
- iv. *Fifth generation* *very large scale integrated (VLSI)*



8. State any four types of scanners and state whether they are optical or magnetic. [4 marks]

- a. *OCR (e.g. flatbed scanner)* - *optical*
- b. *OBR (e.g. bar code reader)* - *optical*
- c. *OMR (e.g. mark reader)* - *optical*
- d. *MICR (e.g. cheque reader)* - *magnetic*

9. List any four factors that can damage computer in the computer laboratory and state how they can be avoided. [4 marks]

<i>Factor</i>	<i>Preventive measures</i>
<i>Dust</i>	<ul style="list-style-type: none">1. <i>Keep the room clean</i>2. <i>Build the computer laboratory away from busy paths such as roads</i>
<i>Smoke</i>	<ul style="list-style-type: none">1. <i>Avoid smoking from the computer laboratory</i>2. <i>Build the computer laboratory away from the kitchen</i>
<i>Dampness</i>	<ul style="list-style-type: none">1. <i>Computer laboratory should be kept clean and dry at all times</i>
<i>Electrical faults</i>	<ul style="list-style-type: none">1. <i>Ensure proper cabling</i>2. <i>Install the UPS</i>
<i>Humidity</i>	<ul style="list-style-type: none">1. <i>Install humidifiers and dehumidifiers</i>
<i>Viruses</i>	<ul style="list-style-type: none">1. <i>Install anti-virus software</i>2. <i>Avoid using foreign disks in the computer laboratory</i>
<i>Temperature</i>	<ul style="list-style-type: none">1. <i>Install air conditioner systems</i>2. <i>Ensure proper ventilation</i>
<i>Fire</i>	<ul style="list-style-type: none">1. <i>Do not carry inflammables to computer laboratory</i>2. <i>Do not smoke in the computer laboratory</i>

10. State the use of the following keys of the keyboard; [5 marks]

- a. caps lock key

activates and deactivates lower case and upper case of letters

- b. pg dn key

scrolls the page downwards

- c. end key

takes the cursor to the end of the current line

- d. spacebar

creates a space in between characters

- e. esc key

closes down a pop-up window



11. Match the keyboard keys below with their respective categories. [5 marks]

Keys	Category
esc, shift, ctrl, alt, ...	Function keys
h, 4, /, ?, ‘, ’, @,], ...	Numeric keypad keys
1, 2, 3, +, -, =, *, ...	Alphanumeric keys
F1, F2, F3, ..., F12	Cursor movement and editing keys
pg up, pg dn, end, enter, del, arrow keys, ...	Special PC operation keys

12. Write the following acronyms in full; [5 marks]

a. POS

Point Of Sale

b. POST

Power on Self-Test

c. BIOS

Basic Input Output System

d. RAM

Random Access Memory

e. ROM

Read Only Memory

13. State four characteristics that humans share with computers. [4 marks]

a. *Both can process data into information*

b. *Both can store information/data*

c. *Both can input data*

d. *Both can output information*

e. *Both can transmit information/data*



14. State any two machines mentioned in the history of computers after 1935. [2 marks]

- a. Z1 (1936)
- b. Atanasoff-Berry Computer (ABC) (1939)
- c. ENIAC/EDVAC (1946)
- d. UNIVAC (1946)
- e. Osborne 1 (1981)
- f. IBM Series (from 1981) i.e. IBM 5150
- g. TRS - 80 (1977)
- h. 286-AT (1984)

15. Describe the following types of computers. [3 marks]

- a. Super computers

they are the largest computers in the world with multiple processors. Consumers more power and very powerful in processing

- b. Digital computers

processes data that is discrete in nature (in form of numbers, symbols, letters etc.)

- c. Special purpose computers

these are computers designed to handle only one task.

16. Define the following computer words; [3 marks]

- a. bit

this is a unit for measuring binary digits. Represented as a '0' or a '1' and used to store data and execute instructions

- b. Hertz

it is the SI unit for measuring the speed of a computer processing power in form of a frequency

- c. Byte

this is the number of bits used to encode a single character of text in a computer (mostly)