

NAME: ADM NO.:

CANDIDATE'S SIGNATURE: DATE:

COMPUTER STUDIES (451)
FORM __ OPENER C.A.T
Theory
MAY - 2018
Time: 90 MINUTES

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. Hospital [5 marks]

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.....
.....

b. University [5 marks]

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2. State **two** reasons for system reboot. *[2 marks]*

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.....

3. Other than the keyboard, 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 mobile phone 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. Arrange (mini computers, mainframes, super computers, microcomputers) from the largest to the smallest. **[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.

.....

d.

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

a. Return key

.....

b. Tab key

.....

c. Home key

.....

d. Backspace key

.....

e. Num lock 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

.....

b. POST

.....

c. BIOS

.....

d. RAM

.....

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. [2 marks]

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

a. Analogue computers

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b. Digital computers

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c. General purpose computers

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.....

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

a. Bit

.....
.....

b. Hertz

.....
.....

c. Byte

.....
.....



Answers

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

a. Hospital [1× 5 = 5 marks]

- i. Run life support machines*
- ii. Run security systems such as CCTV cameras and security alarms*
- iii. Save records of workers, patients and assets*
- iv. Communication*
- v. Research*
- vi. Running air conditioning systems*
- vii. Diagnosing patients*

b. University [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 in tall buildings*
- 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 university timetables*
- xi. Producing academic reports*
- xii. Keeping records of workers, students and assets*
- xiii. Communications such as use of e-mails*



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 keyboard, list any other three input devices. [1× 3 = 3 marks]

- a. keypad
- b. mouse, 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, lighten (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 × 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 mobile phone is regarded as a computer. [1×4= 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 [1×4= 4 Marks]

- i. *First generationvacuum tubes/thermionic valves*
- ii. *Second generationtransistors*
- iii. *Third generationIntegrated circuits*
- iv. *Fifth generationvery large scale integrated (VLSI)*

8. Arrange (mini computers, mainframes, super computers, microcomputers) from the smallest to the largest. [4 marks]

microcomputers, mini computers, mainframes, super computer.



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>	<ol 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>	<ol 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>	<ol style="list-style-type: none">1. <i>Computer laboratory should be kept clean and dry at all times</i>
<i>Electrical faults</i>	<ol style="list-style-type: none">1. <i>Ensure proper cabling</i>2. <i>Install the UPS</i>
<i>Humidity</i>	<ol style="list-style-type: none">1. <i>Install humidifiers and dehumidifiers</i>
<i>Viruses</i>	<ol 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>	<ol style="list-style-type: none">1. <i>Install air conditioner systems</i>2. <i>Ensure proper ventilation</i>
<i>Fire</i>	<ol 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. Return key

i. Also called the enter key, takes the cursor to the next line

ii. Sends system commands to the CPU for execution

b. Tab key

i. Used to indent

c. Home key

i. Takes the cursor to the start of the current line

d. Backspace key

i. Deletes a character on the left of the cursor position

e. Num lock key

i. Activates the numeric keypad keys



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. [2 marks]

a. *Abacus (2400 BC)*



- b. *Napier's Bones (1614)*
- c. *Slide rule (1622)*
- d. *Pascaline (1642)*
- e. *Stepped Reckoner (1672)*
- f. *Jacquard loom (1881)*
- g. *Arithometer (1820)*
- h. *Analytical (Difference) engine (1822)*
- i. *Tabulating machine (1890)*
- j. *Harvard mark 1 (1943)*
- k. *Z1 (1936)*
- l. *Atanasoff – Berry Computer (ABC) (1939)*
- m. *ENIAC (1946)*
- n. *UNIVAC (1946)*
- o. *Osborne 1 (1981)*
- p. *IBM Series (from 1981) i.e. IBM 5150*
- q. *TRS – 80 (1977)*
- r. *286-AT (1984)*

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

- a. Analogue computers

processes data that is continuous in nature (represented in physical quantities)

- b. Digital computers

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

- c. General purpose computers

these are computers that can handle a variety of tasks

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 8-bits)

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