

NAME: ..... ADM NO.: .....

CANDIDATE'S SIGNATURE: ..... DATE: .....

COMPUTER STUDIES (451)  
FORM 1 MID-TERM C.A.T  
Theory  
JUNE - 2018  
Time: 2 ½ HOURS

# 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 [100 marks]

1. State **three** Computer Laboratory precautions and measures necessary to protect the computer user. [3 marks]

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2. Describe the following computer words: [3 marks]

a. Artificial Intelligence;

.....  
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b. Data;

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.....

c. Information;

.....



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

a. Media and Entertainment *[5 marks]*

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b. Transportation *[5 marks]*

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4.

a. State **two** reasons why the keyboard is categorized as an input device. *[2 marks]*

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

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5. State **three** differences between third generations and forth generation computers. *[3 marks]*

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

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7. State the **three** categories of microcomputers *[3 marks]*

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

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9. State **three** reasons why a mobile phone is regarded as a computer. *[3 marks]*

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10. Name the processing technology that was used to develop the following generations of computers. *[3 marks]*

- a. Second generation .....
- b. Third generation .....
- c. Fifth generation .....



11. State **four** reasons why smartphones and tablets are more popular than desktops and laptops in the current world *[4 marks]*

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12. List any **four** reasons why the study of *'The Computer Laboratory'* is essential in the study of computer studies as a subject. *[4 marks]*

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

- a. Menu key  
.....
- b. Insert key  
.....
- c. Home key  
.....
- d. Del key  
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e. Print Screen key

.....

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.....

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

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

15. Write the following acronyms in full; [7 marks]

a. ENIAC

.....

b. PC

.....

c. EEPROM

.....

d. UPS

.....

e. UNIVAC

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f. CPU

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g. I/O

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

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17. State any **two** machines mentioned in the history of computers since 1936. *[2 marks]*

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

a. Super computers

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b. Palmtop computers

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c. First Generation computers

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19. Convert the following units to bytes; *[3 marks]*

a. Kilobyte

.....  
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b. Megabyte

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c. Gigabyte

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20.

a. What is a computer system? [1 mark]

.....  
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b. State the three elements of a computer system. [3 marks]

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21.

a. The SI unit for measuring the speed of a computer is called? [1 mark]

.....

b. Why is the speed of a computer **not** measured in KILOMETERS/HOUR? [1 mark]

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.....

22. Your Kiswahili teacher who is not too conversant with computers wants to purchase a laptop computer and has resolved to seek your advice of the same. Describe **four** features that you would advise her to seriously consider while purchasing it. [4 marks]

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23. Other than the mouse, state any **two** devices categorized as pointing devices [2 marks]

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.....



24.

a. What are peripheral devices? [1 mark]

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b. State any **three** examples of peripheral devices [3 marks]

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25. Discuss [in **one** paragraph] about the future of computers; (featuring ‘*processing power & speed*’, ‘*memory & storage capacity*’, ‘*technology*’, ‘*size*’ and ‘*software*’) [5 marks]

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# Answers

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1. State **three** Computer Laboratory precautions and measures necessary to protect the computer user. [3 marks]

- a. *Proper cabling*
- b. *Monitor should be placed at the eye level of the computer user*
- c. *Seats with straight backrest*
- d. *Installing of anti-glare screens*
- e. *Proper lighting of the room*
- f. *Proper ventilation*
- g. *User should be instructed not to touch metallic computer parts with wet hands*
- h. *Installation of fire extinguishers*
- i. *Do not carry inflammables to the computer laboratory.*

2. Describe the following computer words: [3 marks]

a. **Artificial Intelligence;**

*This is a field of computer science that deals with designing machines that mimic human intelligence such as reasoning, self-correction and learning.*

b. **Data;**

*These are raw facts which are meaningless to the user*

c. **Information;**

*Processed data that has meaning*

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

a. **Media and Entertainment [1× 5 = 5 marks]**

- i. *Production of TV/Radio programs*
- ii. *Music productions*
- iii. *Editing of videos*
- iv. *Playing videos and audios*



- v. *Communications*
- vi. *Research*
- vii. *Security*
- viii. *Keeping records*
- ix. *Marketing*

**b. Transportation [1× 5 = 5 marks]**

- i. *Controlling traffic lights*
- ii. *Controlling transportation machines*
- iii. *Running security systems*
- iv. *Research work such as gathering information*
- v. *Running airport control systems*
- vi. *Used for communication purposes*
- vii. *Trains and aeroplanes scheduling*
- viii. *Mapping routes*
- ix. *Airplane/ ship reservation systems*

**4.**

**a. State two reasons why the keyboard is categorized as an input device. [2 marks]**

- a) *Enters data into a computer*
- b) *Converts data from human readable form into machine readable form for processing*

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

- a) *Mouse, joy stick, track ball*
- b) *Keypad*
- c) *Scanners*
- d) *Digitizers*
- e) *Digital camera*
- f) *Interactive white board\*
- g) *Light pen*
- h) *Touch screen*
- i) *Tablet*



**5. State three differences between first generation and fifth generation computers. [3**

**marks]**

<b>First Gen.</b>	<b>Fifth Gen.</b>
1 <i>Big in size</i>	1 <i>Small in size</i>
2 <i>Consumed a lot of power</i>	2 <i>Consume less power</i>
3 <i>Generated a lot of heat</i>	3 <i>Generate less heat</i>
4 <i>Used vacuum tubes and thermionic valves to process</i>	4 <i>Use VLSI to process</i>
5 <i>Broke down more often</i>	5 <i>Are more stable</i>
6 <i>Low processing power/ slow in processing</i>	6 <i>More processing power/ fast in processing</i>
7 <i>Less storage capacity</i>	7 <i>More storage capacity</i>
8 <i>Less memory</i>	8 <i>More memory</i>
9 <i>Not portable</i>	9 <i>Portable</i>
10 <i>Used command line software</i>	10 <i>Use GUI software</i>

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

**[2 × 3 = 6 Marks]**

- PSU [power supply unit]* - used to supply power to the motherboard and other devices. Also converts AC to DC for computer consumption
- Motherboard* – assist the CPU to process and helps other devices to communicate with each other by providing path links and interface.
- CPU* – coordinate all activities, manipulate data
- Hard disk* – Provide permanent storage of data
- Drives* – such as DVD Drive used to read removable storage media.
- Cards* – supports peripheral devices

*[Any other device the examiner can moderate and approve]*

**7. State the three categories of microcomputers [3 marks]**

- Desktops*
- Laptops*
- Palmtops*



**8. Give three reasons why computers should be shutdown with the right procedure. [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.

**9. 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

**10. Name the technology that was used to develop the following generations of computers [1×4= 4 Marks]**

- i. Second generation .....transistors
- ii. Third generation .....Integrated circuits
- iii. Fifth generation .....very large scale integrated (VLSI)

**11. State four reasons why smartphones and tablets are more popular than desktops and laptops in the current world [4 marks]**

- a. They are portable and easy to carry
- b. They are relatively cheap & easy to maintain.
- c. They are easily available and their spare part too are easy to acquire.
- d. Do not require education to get skills on how to use them.
- e. They support advanced voice data communications which is more efficient as compared to desktops and laptops
- f. Can be used in areas without electricity
- g. They consume less power.
- h. They can be used to do a variety of tasks
- i. They are enhanced with exciting social software applications such as Whatsapp, Facebook, Twitter, Instagram etc.
- j. They have exciting features such as a camera, touch screen, multimedia capabilities and wireless communications capabilities.



**12. List any four reasons why the study of ‘The Computer Laboratory’ is essential in the study of computer studies as a subject. [4 marks]**

- a) *Reduces expenses on maintenance*
- b) *Ensure the safety of the learners*
- c) *Ensure the safety of computers*
- d) *Trains the learner on how to respond during emergence*
- e) *To create a conducive environment for the execution of computers and learning of computer studies as a subject.*
- f) *Avoid loss of data especially private and confidential.*
- g) *Trains the learner to be self-reliant.*
- h) *Creates awareness to the learner on usage of hardware and software resources and restrictions especially on the EULA – End User Licence Agreement with the manufacturer.*

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

- a. **Menu key**  
*displays a dropdown list of commands for the user to choose from. Works like ‘right clicking the mouse*
- b. **Insert key**  
*swaps change over modes from insert mode to type over mode and vice versa\*
- c. **Home key**  
*takes the cursor to the beginning of the current line*
- d. **Del key**  
*gets rid of a character or a space right of the cursor position*
- e. **Print Screen key**  
*screen shots images on the screen of a computer*

**14. 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

**15. Write the following acronyms in full; [7 marks]**

**a. ENIAC**

*Electronic Numeric Integrator and Calculator*

**b. PC**

*Personal Computer*



**c. EEPROM**

*Electrically Erasable Programmable Read Only Memory*

**d. UPS**

*uninterruptible power supply*

**e. UNIVAC**

*Universal Automatic Computer*

**f. CPU**

*Central Processing Unit*

**g. I/O**

*input/output*

**16. 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*

**17. State any two machines mentioned in the history of computers since 1936. [2 marks]**

- a. *Harvard mark 1 (1943)*
- b. *Z1 (1936)*
- c. *Atanasoff – Berry Computer (ABC) (1939)*
- d. *ENIAC (1946)*
- e. *UNIVAC (1946)*
- f. *Osborne 1 (1981)*
- g. *IBM Series (from 1981) i.e. IBM 5150*
- h. *TRS – 80 (1977)*
- i. *286-AT (1984)*

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



a. **Super computers**

*they are the largest computers of all. Have high memory and high processing power. Are expensive as compared to others.*

b. **Palmtop computers**

*these are computers used while held on the palm of a hand such as a mobile phone*

c. **First Generation computers**

*these computers were the first electronic computers, were large in size, used vacuum tubes and thermionic valves to process, generated a lot of heat and consumed a lot of power.*

**19. Convert the following units to bytes; [3 marks]**

a. Kilobytes

*1000 bytes*

b. Megabytes

*1000 000 bytes*

c. Gigabytes

*1000 000 000 bytes*

20.

**a. What is a computer system? [1 mark]**

*a computer system is a collection of computer entities that work together to input, process and output information.*

**b. State the three elements of a computer system. [3 marks]**

i. *Hardware*

ii. *Software*

iii. *Liveware*

21. .

**a. The SI unit for measuring the speed of a computer is called? [1 mark]**

*hertz (hz)*

**b. Why is the speed of a computer not measured in KILOMETERS/HOUR? [1 mark]**

*the speed of a computer does not require distance travelled rather execution of processes at a given period of time measured in the number of cycles per second also called **frequency**.*



**22. Your Kiswahili teacher who is not too conversant with computers wants to purchase a laptop computer and has resolved to seek your advice of the same. Describe four features that you would advise her to seriously consider while purchasing it. [4 marks]**

- a. *End user licence agreement [EULA]*
- b. *Warranty*
- c. *Processing speed*
- d. *GUI Software*
- e. *Memory*
- f. *Storage capacity*
- g. *Enhancements of ports and the number of peripheral devices it can support.*

**23. Other than the mouse, state any two devices categorized as pointing devices [2 marks]**

- a. *Joystick*
- b. *Lighpen*
- c. *Trackball*

**24.**

**a. What are peripheral devices? [1 mark]**

*these are input/output devices that can be connected to the computer chassis*

**b. State any three examples of peripheral devices [3 marks]**

*printer, modem, monitor, mouse, camera, scanner, keyboard, plotter*

**25. Discuss [in one paragraph] about the future of computers; (featuring ‘processing power & speed’, ‘memory & storage capacity’, ‘technology’, ‘size’ and ‘software’) [5 marks]**

**a. on ‘processing power & speed’,**

*award a mark on either **high processing power** or **high processing speed** [1mk]*

**b. on ‘memory & storage capacity’,**

*award a mark on **large memory** or **large storage capacity** or **future RAM will not be volatile** [1mk]*





c. **On ‘technology’,**

*award a mark on the mention of any of these words used correctly: Qubits, 64, 128, 256-bit processor, robotics, nanotechnology, fibre optic, [neural electronics] et al.*

*[1mk]*

d. **on ‘size’**

*award a mark on small size, or customizable size, portability [1mk]*

e. **On ‘software’**

*award a mark on existence of human language programmable codes, computers will have ability to learn, reason and adjust to circumstances. [artificial intelligence] [1mk]*