Name………………………………………………….   **Index No…………………/…….**

School………………………………………………   **Date …………………………..…**

Candidate's Signature………………....................……

451/1
COMPUTER STUDIES
PAPER 1
THEORY
Time: 2 ½ Hours

Kenya Certificate of Secondary Education (K.C.S.E)

451/1
COMPUTER STUDIES
PAPER 1
THEORY
Time: 2 ½ Hours

INSTRUCTIONS TO CANDIDATES

1.   Write your name and index number in the spaces provided above
2.   This paper consists of **two** sections **A** and **B.**
3.   Answer **ALL** questions in section **A.**
4.   Answer question and any other THREE questions from section *B*.
5.   All answers should be written in the spaces provided on the question paper.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	CANDIDATES SCORE
A	1 - 15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

This paper consists of 8 printed pages.
Candidates should check the question paper to ensure that all
pages are printed as indicated and no questions are missing

1.   State three classifications of micro computers when classified according to size.   (3mks)

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2. Give three main advantages of using computers for data processing functions over other types of office and business equipments   (3mks)

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3. (a) What is disk partitioning?   (2mks)

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    (b) Give two reasons for partitioning a disk.   (2mks)

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4. Give a reason for each of the following hardware considerations when selecting a computer system   (2 mks)

    a) Processor speed.

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    b) Warranty.

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c)   Upgradeability and compatibility.

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d)   Portability.

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5.   Outline the functions of the following utility software   (3mks)

(i)   Loaders.

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(ii)   Debuggers.

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(iii)   Linkers.

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6.   Draw a diagram to illustrate the following.   (3mks)

(i)   USB Port.

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(ii)   Serial Port.

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(iii)   Parallel Port.

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7.   A computer operator in your school wanted to print a document but the printer could not print yet
the online light is on and the printer paper is correctly placed. Give the other
possible reasons why the printing process failed.   (2mks)

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8.   Differentiate between office and magnetic scanning techniques and give two example of
each.   (4mks)

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9.   Define the following terms as used in word processing.
(i)   Word wrap   (lmk)

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(ii)   Thesaurus   (lmk)

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10. In a war torn countries such as Somalia, explosives that get buried under ground requires removal in order to provide safety for the people.

(a) Name a computer controlled device that would be used safely for detecting such explosives (lmk)

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(b) Explain why you recommend the use of such a device in (a) above (lmk)

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11. Explain briefly how Electronic Funds Transfer (EFT) and Electronic Point of Sale (EPOS) is used to facilitate business in Nakumatt supermarkets in Kenya (4mks)

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12. The most popular type of electronic data storage currently is magnetic disk storage such as hard disk or Winchester disk. Give reason as to why they are popular (2mks)

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13. Outline two advantages of hard disk over floppy disk. (2mks)

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14. One stage of system development is system testing. Outline the advantages of this stage before Implementation (1 mks)

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15. State three system changeover strategies (3 mks)

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SECTION B (60 MARKS)

Answer question 16 and any other three questions from this section in the spaces provided.

16.   a)   Define the terminologies;

        i)   Source code

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        ii)   Object code   (4mks)

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    b)   With an aid of a pseudo code and flow chart, write a computer program that can

        be used to compare the values of two numbers and print the largest number.(11 mks)

17.   a)   Define the following terms.   (4 mks)

i) Record

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ii) File.

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iii) Database

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iv) field

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b   i)   List any three ways of dealing with virus on a computer.   (3mks)

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ii)   Explain the functions performed by: (6 mks)

a)   The control unit

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b)   Arithmetic and logic unit (ALU)

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c)   Main memory:

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iii)   what is the difference between hacking and cracking   (2 mks)

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18   a)   What is the hexadecimal equivalent of 7478   (3 Mks)

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17.   a)   Define the following terms.   (4 mks)

       i)   Record

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       ii)   File.

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       iii)   Database

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                    a)   The control unit

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b)   Arithmetic and logic unit (ALU)

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c)   Main memory:

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iii)   What is the difference between hacking and cracking   (2 mks)

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18.   a)   What is the hexadecimal equivalent of 7478   (3 Mks)

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b)   Use one's compliment to solve the following sum: (2 Mks)

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c)   State two reasons for using binary system in digital technology.   (2 Mks)

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d)   Explain the term attenuation as used in networking.   (2 Mks)

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e)   i)   Explain the following terms as used in fibre optic cables   (4 Mks)

        i)   Single mode

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      ii)   Multi-mode

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    f)   Convert 7.125_{10} to its binary equivalent.   (2 Mks)

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19   i)   Describe three ways in which computers have positively impacted on education. (3 mks)

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    ii)   The traffic lights serve as output devices for a computerized traffic system. Name the

           appropriate input device for this system.   (1 Mk)

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    iii)   State three advantages of computer based simulation.   (6 Mks)

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    iv)   Differentiate between a software engineer and a computer engineer.   (2 Mks)

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    v)   Name three duties that are carried out by a web administrator.   (3 Mks)

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20. (a.)   Explain three components of expert systems.   (6mks)

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(b.)   Highlight two types of job opportunities available in the field of computer hardware 2mks)

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(c.)   List any three internet service providers in Kenya   (3mks)

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(d.)   Describe any four internet services   (4mks)

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