NAME.....INDEX NO.....

SCHOOL..... Candidate's sign.....

Date.....

451/1

COMPUTER STUDIES

PAPER 1

(Theory)

2012

TIME 2½ HOURS.

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

COMPUTER STUDIES

451/1

PAPER 1

INSTRUCTION TO CANDIDATES

- *Write your name and index number in the spaces provided above*
- *This paper consists of **Two** sections **A** and **B***
- *Answer **ALL** questions in section **A***
- *Answer question16 and any other **THREE** questions from section **B***
- *All answers should be written in the spaces provided on the question paper*

FOR EXAMINER'S USE ONLY

SECTION	QUSTIONS	CANDIDATE'S SCORE
A	1 -15	
B	16	
	17	
	18	
	19	
	20	
	TOTAL SCORE	

This paper consists of 9 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing

SECTION A (40 MARKS)

Answer ALL the questions in this section

1. State the technology used in the following computer generations (2mks)

i)4th generation:

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ii)1st generation:

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iii)2nd generation:

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iv)3rd generation:

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2. Outline **two** areas that should be considered when categorizing software. (1mk)

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3. State any **three** disadvantages of a magnetic diskette. (3mks)

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4. a) Define the data processing. (1mk)

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b) Explain **two** characteristics of good information. (2mks)

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5. Distinguish between data verification and data validation. (2mks)

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6. Describe the following menu tools as used in Ms. Word (2mks)

i) Print layout:

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ii) Web layout:

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7. Define the following terms as used in mail merging (4mks)

i) Main document:

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ii) Data source

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8. a)Difference between real –time system and online systems. (2mks)

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b) Explain how information and communication technology has contributed to teaching and learning in schools. (2mks)

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9. a) State the use of the following network devices. (2mks)

i) Network interface cards

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ii) Routers

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iii) Distinguish between thinnet and thicknet coaxial cables. (2mks)

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10. Convert (111.010_2) to decimal number. (3mks)

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11. Explain the type of errors that are likely to exist in a program? (4mks)

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12. State **three** ways in which **ICT** can be used in industrial control. (3mks)

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13. State **two** reasons why it is necessary to have well connected and proper cables in a computer lab (2mks)

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14. What do you understand by the term '**soft system''** in a system development? (1mk)

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15. What is a relational database (1mk)

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SECTION B (60 MARKS)

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

16. Mumias sugar company pays casual employees based on the number of hours worked as follows

Less than 10 hours @ khs.100/= per hour

Up to 15 hours @ khs150/= per hour

More than 15 hours @khs200/= /per hour

a) Write a pseudo code to input the name, rate hours worked. The pseudo code should output the name, hours worked and the wage paid. (6mks)

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b) Draw a flowchart for the above pseudo code. (5mks)

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c) Write brief notes on structured programming (4mks)

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17 a) List **four** characteristics of a system (2mks)

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b) Give any **three** circumstances that may make an organization to develop a new information system (3mks)

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c) Study the spreadsheet below and answer the questions that follow

	A	B	C	D
1	WESTLINK COMPUTER BOOKS CENTRE			
2	TITLE	PRICE	NO. SOLD	COST
3	Computer longhorn book2	320	25	
4	Visual basic (6) turbo	820	21	
5	Computer longhorn book4	350	100	
6	Computer science	900	12	
7	Computer Applications	845	36	
8	Computer hardware	1250	10	
9	Computer software	1250	27	
10				

i) Write down the formula used to find the price of the cheapest book. (1mk)

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ii) Write down the formula used to determine the total sales for the book titled' computer applications (1mk)

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iii) Write down the formula used determine the average price of the all books (2mks)

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d) State any **four** advantages of using an electronic spreadsheet as compared to a traditional spreadsheet (2mks)

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e) Differentiate between a column chart and a bar chart as used in spreadsheets (4mks)

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f) Define the term gutter in relation to column setting in DTP (1mk)

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18. a) Name and describe four main application areas of artificial intelligence in ICT (12mks)

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b) State **three** advantages of automated production in manufacturing industries (3mks)

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19 a) Describe any **two** roles of the following career opportunities in the ICT field. (8mks)

i) Systems analyst

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ii) Information system manager

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iii) Network administrator

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iv) Computer trainer

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b) Distinguish between a primary key and a foreign key as used in DBMS. (2mks)

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c) What do the term header and footer mean? (2mks)

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d) What do you understand by the terms attenuation and baseband signal. (2mks)

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20. a) Define the following terms. (3mks)

i) Record

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ii) File

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iii) Database

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

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ii) Explain the functions performed by (2mks)

a) The control unit

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b) Arithmetic and logic unit (ALU)

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c) Convert the 522^8 to its base 10 equivalent (2mks)

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d) Using long division methods convert 67_{10} into binary. (2mks)

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e) Outline **three** disk management activities. (3mks)

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