Name……………………………………………………………………………. ADM No………………………………..

School……………………………………………………………………… Candidate's Signature……………………

Date ………………………………………….

451/1
COMPUTER STUDIES
(THEORY)
Form 3 - Paper 1
2 ½ Hours
TRIAL 6

2018

FORM 4 THREE

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

INSTRUCTIONS TO CANDIDATES

- Answer all questions in section **A**.
- Answer question 15 (Compulsory) and any other **THREE** questions in section **B**.
- All answers should to be written in the spaces provided in the question paper

For Official use only.

Section	Question	Max. Score	Candidates Score
A	1 – 14	40	
B	15	15	
	16	15	
	17	15	
	18	15	
	19	15	
Total Score			

This paper consists of 12 Printed pages.
Candidates should check the question paper to ensure that all the Papers are printed as indicated and no questions are missing

SECTION A (40 MARKS)

Answer all the questions in this section

1. a) Explain the role of the following

i) Computer programmer. (4mks)

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ii) Software engineer (1mk)

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b) i) What is electronic point of sale terminal? (1mk)

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ii) Explain two advantages of using this system. (2mks)

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iii) Give an application area of this system. (1mk)

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2. Explain the purposes of the following files.

a) Back up (1mk)

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b) Reference (1mk)

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3. a) Perform the following binary arithmetic giving the answer in decimal notation. (2mks)

11101.011 + 111.111

b) State two application areas of virtual reality. (2mks)

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4. Describe the following human computer interfaces (3mks)

a) Graphical User Interface

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b) Command line Interface

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c) Menu Driven Interface

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5. a) State **three** uses of forms in a database management software (DBMS) (1½ mks)

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b) Explain the terms below as used with databases.

(i) Referential Integrity (1mk)

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(ii) Indexes (1mk)

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6. State the **three** functional parts that make up the CPU. (1½ mks)

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7. You are provided with USB, Parallel and Serial cables. Which of the cables provided can be used to:

a) Support variety of peripheral devices. (1mk)

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b) Transmit data in short distance. (1mk)

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c) Transmit data fast in long distance. (1mk)

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8. The formula, =K20 + P$18 was typed in cell L21 and then copied to cell M24 of spreadsheet. Write a formula as it appears in cell M24. (2mks)

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9. Distinguish between logical and physical files as used in computer. (2mks)

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10. Tea processing zone wants to acquire new software,

a) State **three** items that should accompany the software (1½ mks)

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b) State **three** purpose of word processing package. (1½ mks)

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11. Give **two** differences of high and low level languages (2mks)

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12. Define terms below

a) Nibble (1mk)

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……………………………………………………………………………………………

b) Bit (1mk)

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c) Word (1mk)

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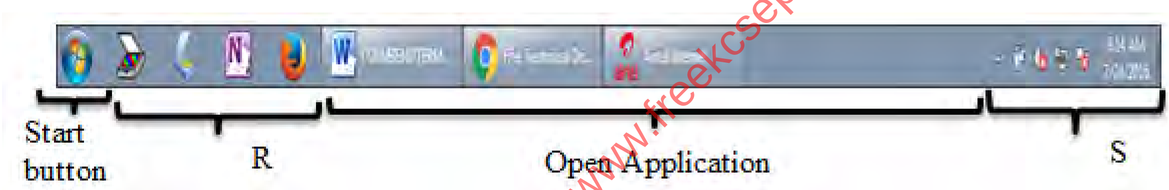
13. The diagram below represents a task bar. Use it to answer the questions below.



a) Name the part labeled

(i) R ………………………………………………………………… (½ mk)

(ii) S ………………………………………………………………… (½ mk)

b) Explain the difference between R and S (1mk)

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14. a) Name any **two** examples of electronic data processing modes (1mk)

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b) Explain safety precaution in computer safeguarding

(i) Hardware (1mk)

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(ii) Loss of computer programs (1mk)

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SECTION B: 60MARKS

Answer question 15 and any other three questions from this section.

15. a) Define the terms below

i) Algorithm (1mk)

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ii) Pseudo code (1mk)

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iii) Flowchart (1mk)

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b) Draw a flowchart to compute the result of the following formula (5mks)

$$K = \frac{1}{(M+1)^2}$$

c) Write a pseudo code for a flowchart in b(above) (5mks)

d) Describe the difference between the **While** and **Repeat..Until** loops (2mks)

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16. You are provided with the following entries in the spreadsheet.

	A	B	C	D	E	F	G
		Months					
1	Items	Jan	Feb	Mar	April		
2	Shoes	500	500	500	500		
3	Pencils	400	300	600	700		
4	Books	100	200	150	350		
5	Ruler	900	760	350	102		
6	Rubber	60	80	200	450		

a) State the cell data type represented by

i) Cell A4 (1mk)

… …

… …

ii) Cell C4 (1mk)

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… …

iii) Explain the difference between cell A4 and C4 (1mk)

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b) Provide a formula for cell E5 that can be used to give 10% increase of cell E5 (2mks)

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c) Using **COUNTIF function,** write an expression to determine the number of items greater than 300 in the month of January (2mks)

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d) Explain two reasons why

i) Hypertext markup language is not a true programming language. (2mks)

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ii) State three examples of web scripting language. (3mks)

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e) Differentiate between **source program** and **object code** as used in programming. (1mk)

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(f) Explain the concept of modular programming and give **one** advantage associated with it. (2mks)

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17. a) i) Explain **two** advantages of acquiring micro-computers in schools (2mks)

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ii) Describe any three types of computational errors. (3mks)

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iii) Explain the term data integrity. (2mks)

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b) Distinguish between:

i) Data encryption and passwords. (1mk)

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… …

ii) Dry run and walk through (1mk)

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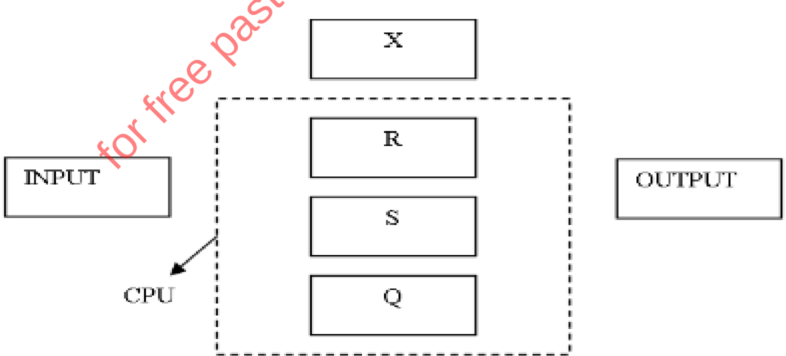
… …

c) The diagram below represents essential features of a computer system. Study the diagram and answer the question the follows:



i) Name the components

X … .

R …

S … .

Q ………………………………………………………………………… (4mks)

ii) In the diagram above indicate the direction of data flow using arrows. (2mks)

18\. a) i) What is multimedia? (1mk)

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ii) State two examples of multimedia system. (2mks)

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b) Firestone Kenya purchased hardware components from World Computer services, Firestone Kenya later demanded a document of warranty.

i) What is a warranty? (1mk)

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ii) Describe three important information that may entail in the warranty. (6mks)

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c) Give three examples of special purpose memories found in the central processing unit. (3mks)

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d) Explain difference between read and write with reference to computer memory. (2mks)

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19. a) Explain how the operating system perform the following:

i) Job sequencing (2mks)

ii) Job scheduling (2mks)

b) With use of examples describe types of desktop publishing software. (4mks)

c) Define the terms below

i) Chatting (1mk)

ii) Website (1mk)

iii) Search engine (1mk)

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d) Explain the effect of information technology in:

i) Employment (2mks)

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ii) Environment (2mks)

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