

NAME.....INDEX NO.

CANDIDATE'S SIGNATURE.....

CLASS.....Date.....

MINI-MOCK

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

451/1

COMPUTER

Paper 1

March 2014

2 ½ Hours

INSTRUCTIONS TO CANDIDATES

- This paper has **TWO** sections A and B.
- Answer **ALL** the questions in section A
- Answer question 16 (compulsory) and any other **THREE** questions from section B.
- All answers should be written in the spaces provided on the question paper.

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

This paper consists of 13 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 Questions from this section

1. Distinguish between the following:

(a) Optical Scanners and Magnetic Ink Scanners.

(2 Marks)

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(b) BIOS Chips and CMOS Chips
(Marks)

(2

2. (a) Differentiate between Digital Signal and Analog Signal as used in Data Communication. (2 Marks)

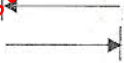
(b) List two ways in which computers are used in communication industry (1 Mark)

3. A form one student tried to save his document in a portable medium while typing. Describe three precautions to undertake when connecting it to a computer. (3 Marks)

4. a) State three toggle keys used to optimize space on a keyboard during typing operation. (1 ½ Marks)

b) Identify the following key symbols

(1 ½ Marks)



5. Computer crime keeps on baffling security personnel making it difficult to audit.
Explain why.

(3Marks)

6. a) Explain two functions of a UPS.

(2 Marks)

- b) What is the importance of a surge protector?

(1 Marks)

7. Explain three advantages of using Universal Serial Bus.

(3 Marks)

8. a) Differentiate between a workbook and a worksheet.

(2 Marks)

b) The formula =A1 +C1 was typed in cell E2. How will it appear when copied to cell E3

(1

Marks)

9 a) List the main types of queries in a database

(1 Mark)

b) Explain the term "Macros" as used in Databases

(1

Mark)

10. Differentiate between "System Entropy" and "Holistic Thinking" in SDLC. (2

Marks)

11 Explain the following terms used in DTP:

a) Master Page

(1

Mark)

b) Cropping

(1

Mark)

12. Explain two disadvantages of using monolithic programs

(2 Marks)

13. Highlighting two tools that a System Analyst may use in system design.

(2 Marks)

14 Explain the parts of the following addresses in relation to the Internet.

(3 Marks)

i) www.stareheboyscentre.ac.ke

ii) nyaswenta@stareheboyscentre.ac.ke

15. a) Define virtual reality.

(1 Mark)

b) List any two applications of virtual reality
(1 Mark).

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SECTION B (60 MARKS)

Answer question 16 and any other three questions from this section

16.

- (a) Draw a program flowchart to display the list of students in the Institute, who are below 19 years of age, who passed KNEC diploma course in Computer Studies assuming each student take 6 subjects. The successful candidates must have a mean score of at least 50.1 percent and must have scored at least 65 percent in QT subject

(7

Marks)

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(b) Write a pseudo code to find the sum of any 15 numbers and displays the result.

(3
Mark
s)

(c) Write down the advantages of first generation computer programming language.

(2
Marks)

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(d) Write down three characteristics of a FOR loop

(3 Marks)

17.

(a) Describe the following careers in the computing field.

(3Marks)

i) System Analysis

ii) Software engineering

iii) Database Administration

(b) Identify any **four** responsibilities of a System Analyst

(4 Marks)

(c) Differentiate between Autocorrect and Auto complete as used in word processing.

(2

Marks)

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(d) Describe the impact of Information Communication Technology in the following areas:

(i) Environment

(3

Marks)

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(ii) Commerce

(3

Marks)

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18.

(a) Add the following Binary numbers $10111.111 + 111.011$

(3Marks)

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(b) (i) Using eight bits and twos complement, subtract 74_{10} from 12_{10} . Give your answer in decimal notation (2 Marks)

(ii) Convert 23.325_{10} to its binary equivalent. (2 Marks)

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(c) State any two advantages of digital TV broadcast over analogue technology. (2 Marks)

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

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- (e) You have been approached by your school as an IT Expert to assist in the development of a network within your lab. Briefly explain the factors to consider when choosing a Topology. (4 Marks)
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19.

- (a) (i) Explain two possible causes of system change in an organisation. (2Marks)
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- (ii) Explain **THREE** reasons for staff training during system changeover (3 Marks)
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(c) (i) Explain the main areas contained in a requirement specification during system development.

(2 Marks)

(d) State any TWO advantages and TWO disadvantages of observing employees activities during fact finding/investigation

(2 Marks)

(e) (i) State one advantage and one disadvantage of using expert systems in medicine

(2 Marks)

(ii) Explain the main components of an Expert System

(4 Marks)

20.

Banks issue customers with plastic cards containing magnetic strips or microprocessor chip known as smart cards that can be used to withdraw money from an ATM machine

- a) Explain any two items of information that can be stored on the magnetic strip
(2 Marks)

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- b) (i) List FOUR types of electronic cards other than ATM card (2 Marks)

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- (ii) Define M-Banking (1 Mark)

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- c) (i) What is telecommuting? (2 Marks)

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- (ii) Name three pieces of hardware that would be needed for one to telecommute

(3Marks)

d) (i) Differentiate between kernel and shell as used in operating system

(2 Marks)

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(ii) Explain any THREE functions of an operating system

(3 Marks)

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